Williams Village Elevator Modernization – Phase II

Project Manual

PROJECT NUMBER: PR007793/HSG10818

PROJECT NAME: CAMP – WV – Elevator Modernization – Phase II

PROJECT MANAGER: Jon C. Keiser

December 17, 2013
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University of Colorado
ADVERTISEMENT FOR BIDS
Notice #: 13 - 36
Published Date: Dec 13, 2013

Is this a two step AFB: No
Construction Cost Category: $500 thousand - $1 million
Estimated Construction Cost: $700,000.00
Should this notice include print media information: No
Use your default information in the document:
Project No: PR 007793 / HSG 10818
Project Title: CAMP - WV - Elevator Modernization - Phase II
Project Description: Modernize and upgrade 2 (two) elevator cars (shared hoistway) in Stearns Towers West and 2 (two) elevator cars (shared hoistway) in Darley Towers South.

Project Information
1. The Principal Representative has determined that the entire project shall be substantially complete within 80 calendar days from the date of the Notice to Proceed, and the project shall be finally complete, including the delivery of any or all guarantees and warranties, the submittal of sales and use tax payment forms, the completion of the final punch list and the calling for final inspection, within 3 calendar days, if applicable, from the date of substantial completion. In accordance with Article 46 of the General Conditions of the Contract, Time of Completion and Liquidated Damages, failure to complete the work within the agreed number of calendar days shall be considered breach of contract and subject the bidder to liquidated damages to the extent specified in Article 7D of the Contractor’s Agreement Design/Bid/Build (SC-6.21).

2. The right is reserved to waive informalities or irregularities and to reject any and all Bids.

3. Bidders may procure Bidding Documents from:
http://www.colorado.edu/facilitiesmanagement/pdc/construction/open.html

4. A Deposit of $0.00 will be required for each complete set of Contract Documents. This deposit shall be a guaranty that the documents will be returned in good condition. Such deposits will be returned to (1) Actual Bidders who return the documents before the termination of five (5) business days after the opening of the Bids, (2) Other interested parties who return the documents within five (5) business days after checking them out. Additional copies of any documents, drawings, or specifications will be supplied at the actual cost of reproduction. Bidders desiring the Architect/Engineer to mail bid documents will be required to pay the full cost of mailing. Such expenses will be non-refundable.

5. Each Bid shall be submitted on the required Bid Form and must be accompanied by a Bid Bond on State Buildings Programs Bid Bond Form Sc-6.14 in an amount not less than 5% of the total Bid. The Bid Bond may also be (1) a cashier’s check or (2) a certified check made payable to the Treasurer of the State of Colorado in an amount not less than 5% of the total Bid. The Bid Bond is submitted as a
guaranty that the Bid will be maintained in full force and effect for a period of thirty (30) days after the opening of the Bids for the project.

6. The Bidder promises, in submitting his Bid, that if issued a Notice of Award, he will, within the prescribed time, execute the required Agreement, furnish the required Performance Bond, Labor and Material Payment Bond, Insurance Policy and Certificates of Insurance, or forfeit his Bid Guaranty as Liquidated Damages.

7. For State Public Works, not less than eighty percent (80%) of the labor employed on such projects shall consist of Colorado labor. Colorado labor means any person who is a resident of the state of Colorado at the time of employment.

8. Contractor's Registration is not required.

Scope of Services

Submission Details

Submission Deadline: Jan 8, 2014 11:30 AM MT

Submissions Accepted

Via: In Person

Mail

Details: Department of Facilities Management, Research Laboratory No. 2, 1540 30th Street, Third Floor, Boulder, CO 80309-0453

Comments: Sealed Bids will be received from qualified contractors until this date and time at this location Submission Deadline.

Point Of Contact

Name: Jon C. Keiser, Project Manager

Agency: University of Colorado Boulder

Phone: 303-735-3707

Fax: 303-735-2375

Email: jon.keiser@colorado.edu

Comments:

Meetings

<table>
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<th>Date and Time</th>
<th>Details</th>
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<tr>
<td>Y</td>
<td>Dec 23, 2013 9:00:00 AM MT</td>
<td>A mandatory Pre-Bid Meeting will be held at Stearns Central room 178, 600 30th</td>
<td></td>
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<tr>
<td>Required</td>
<td>Date and Time</td>
<td>Details</td>
<td>Comments</td>
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<td>Street, Boulder, Colorado on Friday, December 20, 2013 starting at 9:00 AM.</td>
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**Specification Details / Attachments**

**Comments:**

**Bids**

No bids available.
STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAMS

INFORMATION FOR BIDDERS

Institution or Agency: University of Colorado Boulder
Project No./Name: PR007793/HSG10818 CAMP - WV – Elevator Modernization – Phase II

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 #** PR007793/HSG10818
- **Project Name** CAMP - WV – Elevator Modernization – Phase II
- **Name and Address of Bidder** ________________________________
- **Date of Opening** Wednesday, January 8, 2014
- **Time of Opening** 11:30am

A bid with missing or inconsistent information may be considered non-responsive and may not be evaluated. The University will be the sole judge in determining the acceptability of an offer. The University also reserves the right to reject any or all bids in part or in whole and to waive technicalities. Any decision shall be considered final

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:
http://www.colorado.gov/cs/Satellite/DPA-EO/DEO/1247524014223
http://www.colorado.edu/facilitiesmanagement/pdc/construction/open.html

10. **CONTRACTOR QUALIFICATIONS:**

A. Prime Contractors:
   a. Prime Contractors bidding this project must complete “University of Colorado (UCB) Contractor Statement of Experience,” and submit it with their Bid.
   b. The Prime Contractor must meet the following minimum requirements and provide written information substantiating their qualifications for evaluation. A Bidder may be found to be non-responsive and their bid rejected if the minimum requirements are not met.

   (1) The Prime Contractor must have successfully completed three (3) projects of $500,000.00 (or larger) in the last five (5) years which were similar in complexity and type to this project. For each project list:
   - Name and location of project, along with a brief description of the project (include size & function).
   - Name, address and phone number of client/ owner and their representative.
   - Contract value and type of contract (prime or subcontract).
   - Year in which work was completed.

   (2) The Contractor must have successfully completed an aggregate of $500,000.00 of projects in the last five (5) years which were similar in complexity and type on which he acted as the prime contractor (may be the same projects listed in item (1), if applicable).

   (3) The firm must have been in business as a Contractor for the last five (5) years.

B. Subcontractors
   a. The Prime Contractor is required to provide subcontractors which meet minimum qualifications for the trades listed below.

   The right is reserved to reject subcontractors that do not meet the minimum requirements. The Prime Contractor will be required to replace rejected subcontractor(s) with one(s) that meet the minimum requirements with no increase in the Bid Amount prior to the Award of Contract.

   Prime Contractor and Subcontractor(s) are advised that there are conditions within the Contract Documents requiring special knowledge and experience to properly execute. The University will require verification of experience to adequately provide materials and perform labor required for the following:
   - Fire Alarm and/or Fire Sprinkler
   - Electrical

   b. For the trades listed (subcontractors) above, the apparent low bidder must submit, within 72 hours of receipt of bids except for holidays and weekends, the “University of Colorado Contractor’s Statement of Experience.

   c. In addition to the information requested in Item (1), the Subcontractor must meet the following minimum requirements and provide written information substantiating their qualifications for evaluation. A Bidder may be found to be non-responsive and their bid rejected if the minimum requirements are not met

   (1) The firm must have been in business for the last five (5) years as trade proposed for this work.

   (2) The firm must have successfully completed at least two (2) projects of similar size, type, and complexity in the last five (5) years. The information must include the following:
(a) Building type description (function use)
(b) Building gross square footage
(c) Subcontract description (be specific)
(d) Subcontract amount
(e) Subcontract change orders
(f) Building owner representative and current telephone number
(g) Building architect name and current telephone number
(h) General contract name and current telephone number

(3) This firm shall give evidence of being able to be bonded up to the value of his work for this project. A letter shall be provided by the bonding agency assuring capability of bonding this subcontract amount.

11. **SITE ACCESS:** Contractors / Bidders may schedule a time subsequent to the Site Inspection / Pre-bid Conference to take measurements or further observe existing conditions by contacting:

   Jon C. Keiser, Project Manager
   University of Colorado at Boulder
   Department of Housing & Dining Services
   (303) 735-3707    EMAIL: jon.keiser@colorado.edu

12. **BID SCHEDULE:**
Publication date: Monday, December 16, 2013
Plans specification available: Monday, December 16, 2013 (Facilities Management Website)
Mandatory pre-bid conference: Friday, December 20, 2013 @ 9:00am (Stearns Central room 178)
Last day for questions: Thursday, January 2, 2014 before 4:00pm
Last day for addenda issue: Monday, January 6, 2014 before 11:00am
Bid date: Wednesday, January 8, 2014 before 11:30am

END
To all Contractors working within the City of Boulder:

Under Boulder’s Revised Code, the contractor is deemed to be the consumer of materials used in the construction project. Contractors may not avoid payment of the City of Boulder sales or use tax by placing provisions in a construction agreement or by using the name of a tax-exempt entity on an invoice or purchase order, regardless that the contractor is indicated thereon as the agent of a tax-exempt entity. **No exemption certificate issued by the Colorado Department of Revenue or any other taxing authority shall be recognized as a basis for exemption from sales or use taxes.**

Estimated use tax must be remitted to the City of Boulder prior to the start of the project. The tax is computed on the full contract price of the project. Follow these steps to compute and remit the sales/use tax to the City:

1. Multiply the full contract price by 0.5 and then multiply the resulting product by the tax rate of 3.41% (0.0341). This is the tax that is due to the City prior to the start of the project.
2. Remit the tax to the Sales Tax Department at 1777 Broadway, P.O. Box 791, Boulder, CO 80306-0791 along with a copy of this completed form.
3. At the completion of the project the construction company has two options for closing out the project with the city.
   - Use the formula in (1.) above to compute the final tax due based on the final contract price (including all change orders). Remit the additional tax due or file a request for refund with the City; or
   - Request that the city perform a full audit. Contact Ed Kaiser at 303-441-3921 or kaisere@bouldercolorado.gov to inform the City of which option you have chosen.

Contractor Name:______________________________________________________
Address:_____________________________________________________________
Phone #:________________________Contact Person:________________________
Project Name:_________________________________________________________
Project Address:_______________________________________________________

Full Contract price   A.______________________
Multiply ‘A’ by 0.5   B.______________________
Multiply ‘B’ by 0.0341   C.______________________

“C” is the amount of tax due to the City of Boulder. If you have any questions regarding sales/use tax or this process, contact Ed Kaiser at the above phone number or address.

Date received:_______________________ City Authority Signature:_________________________

1777 BROADWAY P.O. BOX 791 BOULDER, CO 80306 303/441-3921
Williams Village Complex

The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and treatment and employment in, its educational programs and activities.

<table>
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<tr>
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<tr>
<td><strong>Lot #</strong></td>
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<td>608</td>
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<tr>
<td>614</td>
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<td>624</td>
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10-hour ADA meter available in each metered lot except lot 614.
University of Colorado Boulder

CONTRACTOR’S STATEMENT OF EXPERIENCE

Project Name:  CAMP – WV – Elevator Modernization – Phase II

Project No.  PR 007793/HSG10818

Project Manager:  Jon C. Keiser
Phone:  303-735-3707
Email:  jon.keiser@colorado.edu

Architect/Engineer:  Rosenman Associates

This is a project specific qualification form. Any proposed Sub Contractor, not currently on the UCB Standing Order Contractor program, must fill this out on each project and submit with bid.
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UNIVERSITY OF COLORADO AT BOULDER
CONTRACTOR’S QUALIFICATION STATEMENT

INFORMATION FORM

STATEMENT OF ____________________________________________________________
{(Contractor)}

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 ___
Justiceification: __________________________________________________________
________________________________________________________________________
________________________________________________________________________

Woman-Owned Business Enterprise (WBE) YES ___     NO ___
Justiceification: __________________________________________________________
________________________________________________________________________
________________________________________________________________________

Small Business Enterprise (SBE)     YES ___       NO ___
Justiceification: __________________________________________________________
________________________________________________________________________
________________________________________________________________________

Disadvantaged Business Enterprise (DBE)     YES ___       NO ___
Justiceification: __________________________________________________________
________________________________________________________________________
________________________________________________________________________
If you are a General Contractor interested in bidding on all types of construction, mark “All Classes of Construction” only.

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.

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<th>TYPES OF WORK</th>
<th>MARK WITH (X)</th>
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<td>7. Structural Steel</td>
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<td>8. Steel and Miscellaneous Iron</td>
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<td>9. Painting and Decorating</td>
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<td>10. Laboratory Equipment</td>
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<td>11. Elevator Installation</td>
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<td>12. Plumbing</td>
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<td>13. Heating and Ventilating</td>
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<td>14. Air Conditioning</td>
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<td>15. Boiler and Equipment</td>
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<td>16. Environmental (Describe)</td>
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<td>17. Other (Describe)</td>
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<td>18. Other (Describe)</td>
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<td>19. Other (Describe)</td>
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<tr>
<td>20. Other (Describe)</td>
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</tbody>
</table>
UNIVERSITY OF COLORADO AT BOULDER
CONTRACTOR’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 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
   at Boulder 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 AT BOULDER
CONTRACTOR’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:

<table>
<thead>
<tr>
<th>Individual’s Name</th>
<th>Present Position or Office in Your Organization</th>
<th>Years of Construction Experience</th>
<th>Magnitudes and Type of Work</th>
<th>In What Capacity</th>
</tr>
</thead>
</table>
UNIVERSITY OF COLORADO AT BOULDER
CONTRACTOR’S QUALIFICATION STATEMENT

PROJECT EXPERIENCE

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

<table>
<thead>
<tr>
<th>Year Completed</th>
<th>Project</th>
<th>Type of Work (See Page 2)</th>
<th>Location</th>
<th>Contract Value</th>
<th>Contracting Authority</th>
<th>In what Capacity</th>
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<tr>
<td>Expected Completion Date</td>
<td>Project</td>
<td>Type of Work (See Page 1)</td>
<td>Location</td>
<td>Contract Value</td>
<td>Contracting Authority</td>
<td>Architect or Engineer</td>
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</tbody>
</table>


SURETIES

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

<table>
<thead>
<tr>
<th>Name of Surety and Name and Address of Agent</th>
<th>Project and Location</th>
<th>Period of Bond From</th>
<th>Period of Bond To</th>
<th>General Comments</th>
</tr>
</thead>
</table>


UNIVERSITY OF COLORADO AT BOULDER
CONTRACTOR’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.
AFFIDAVIT FOR CORPORATION

(Name of officer)

(Official capacity)

certifies and says: That he is of the 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 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 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 (date) at (city), (county), State of __________________

(Officer must sign here)

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 AT BOULDER
CONTRACTOR’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 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 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)

_________________________________________ (Name of Firm)

(Remaining members of Firm sign here)

NOTE: Statement will be returned unless affidavit is completed in EVERY respect.
UNIVERSITY OF COLORADO AT BOULDER
CONTRACTOR’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 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 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)
QUALIFICATION

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

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

NOTIFICATION

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

END
Special Contract Conditions For Construction Projects in Occupied Student Housing

Purpose

These Special Contract Conditions are required because this project involves construction within or adjacent to student residences. As such, the Contractor, all workers, subcontractors, deliverymen and anyone else coming on to the work site must be informed of the requirements to respect the students' privacy and enjoyment of their residence halls or apartments. The work must be done in a manner that maintains the security of the residence halls or apartments, limits contact with the students, provides advance notice of any work that may affect the residents, and limits communications about the project to those persons designated by the University.

General Rules

1. Contractor is required to comply with the University of Colorado's Sexual Harassment Policy, copy attached hereto and incorporated herein. Contractor's personnel must adhere to the University of Colorado policy and conduct themselves in a manner that does not constitute sexual harassment (as defined in the policy) as a result of interacting with and around the University of Colorado faculty, staff and students.

   Contractor is required to inform each subcontractor of the University's policy prohibiting sexual harassment. Subcontractors, if any, are required to inform subcontractor personnel of the University's policy prohibiting sexual harassment and to provide all subcontractor personnel copies of the University of Colorado Sexual Harassment Policy.

2. No smoking in any residence hall or apartment building spaces. This includes living and dining spaces, restrooms, circulation areas, attics, mechanical rooms, basements and/or crawl spaces. Any smoking is to be done outside the building and far enough away that smoke cannot enter windows or ventilation systems.

3. The Contractor is required to ensure that noise prior to the daily official start of work does not disrupt students. These noise concerns may include, but are not limited to, equipment warm up, radios and voice noise within the construction site that can be heard within the residence hall room or apartment, and the arrival of early morning deliveries of equipment, concrete, supplies, etc.

   With the exception of certain dates during the academic calendar year, working hours for construction adjacent to or in occupied-building construction are 8:00 A.M. to 5:00 P.M. Monday through Friday. The University may stipulate per bid and Request For Proposal (RFP) documents, the opportunity to work for extended periods of time. The hours established in the RFP/bid supersede this document. This will be standard
unless specifically stated otherwise in the contract. Any request to work during additional hours must be made at least 72 hours in advance of the work and is subject to approval of the Project Manager.

4. No eating, drinking, music or radios are allowed outside designated construction areas in the residence hall building or apartment areas. Prior to the start of work, and with the approval of the University Project Manager, if space is available, one area may be designated for meal and coffee breaks. Eating and drinking in any other part of the facility are prohibited. Wrappers, cups and other trash shall be properly disposed of in receptacles after each break. No trash is to be left in the designated eating area.

5. The Contractor is not to use any of the building furnishings at any time for any reason. In the event furniture has to be moved for access, the contractor must notify the University Project Manager and return the furniture in good condition to its original location immediately after the work is done.

6. Construction personnel are not authorized to be in any Housing Department space outside the construction site/work area. Requests for permission to be outside the construction site/work area for business purposes should be directed to the University Project Manager in order to enter these areas.

7. The Project Manager retains the right to require the Contractor to remove a worker from the project, if the Project Manager determines, in his/her sole discretion, that the worker violated a provision of the Agreement. The worker has the right to a meeting with the Project Manager and the Contractor at which time the Project Manager will inform the worker of the allegations made against him/her. The worker will be given the opportunity to present his/her response before a final decision is made.

Security Requirements

1. University Keys / Cardkeys
   a. Security of housing facilities is of paramount concern. If keys are required, the contractor must check out and sign for all keys at the housing lock shop. **Keys to student rooms, student living areas, student use areas (lounges, classrooms, recreation areas, common bathrooms, etc.) will be issued only for special circumstances where their use is absolutely required by the contractor. These keys must be checked out at the start of the work day and returned at the end of the work day, every day.** Keys not directly accessing student living areas (e.g. mechanical room keys) may be checked out for the duration of the project, with the permission of the University project manager.
   b. Master keys accessing multiple student living areas will not be issued to contractors.
   c. When a contractor signs for a key, they take full responsibility for that key. A lost key may result in re-keying an entire building or complex, the cost of which will be charged to the contractor. Doors are not to be propped open at any time. Contractors working in a secured building are not to let anyone in.
When leaving a facility at the end of a work day, the contractor must make sure that the construction site is secure.

d. Requests for exceptions to the key policy must be made, in writing, to the University project manager, who will consult with the affected Housing Assistant/Associate Director of Housing prior to determining keys to be issued to the contractor.

2. Except for emergencies, special security arrangements must be made at least 72 hours in advance with the University Project Manager in order to enter any occupied residential space, including a student room or apartment, or remove anything from a student’s room or apartment. Special care is to be exercised when access is required into students’ rooms or apartments or any other area outside the construction site. The University Project Manager or their designee must be notified in advance of this need and the Contractor is required to ensure compliance with all University safety and security standards and regulations. Should items need to be removed from a student occupied room or apartment the University Project Manager or his designee will assist with and/or oversee the removal and replacement of the item.

3. Seventy-Two hour notice must be given prior to any work being started or removal of any items. All of the above rules pertaining to smoking, food and drink, furnishings and housekeeping apply when working in a student’s room or apartment. Furnishings shall not be used for construction purposes. **Everything in a student’s room or apartment is a personal belonging and must be respected as such.**

4. The contractor is required to ensure that all personnel, including subcontractors and their personnel, wear University issued identification badges. Jackets and/or shirts with company names and logos are helpful but all workers are required to obtain and display the required University issued ID. Badges will be authorized by the University project manager or appropriate Housing Department personnel.

5. Contractor and University Project Manager are responsible to respond immediately to security and safety concerns, report to campus Police and notify owner for immediate response and action.

6. It is strongly recommended that contractors and subcontractors work in pairs (not alone) in occupied residence housing or dining space unless approval is granted by the University Project Manager.

7. For projects occurring within or adjacent to Security Sensitive HDS facility areas [campus buildings where students and faculty reside (e.g. residence halls)], all employees of the selected contracting firm that works in Housing & Dining Facilities must pass a **background Security Sensitive check using the Colorado Bureau of Investigation as the approved source for the background check.** Link at: [https://www.cbirecordscheck.com/](https://www.cbirecordscheck.com/).

   a. Contractor Responsibility for Conducting Background Check
      Contractors performing Security Sensitive work are responsible for conducting Background Checks on all employees, agents, and subcontractors that provide services to CU-Boulder and, upon CU-
Boulder request, certifying that such employees and agents have satisfactorily completed the Background Check.

b. Required Contract Provision
The following provision shall be included in all contracts with Security Sensitive contractors:
Contractor acknowledges that Contractor’s activities involve heightened risks as a result of access or exposure by Contractor’s employees or agents to one or more Security Sensitive environments. Contractor expressly acknowledges that Contractor shall take all commercially reasonable measures to mitigate any such risks, which measures shall include but are not limited to conducting criminal history checks, financial background checks when appropriate, and reference checks on all employees or agents who will be performing work at the University. Upon University request, Contractor shall certify in writing that it has complied with this provision and that all employees, agents, and subcontractors performing work hereunder have satisfactorily completed Contractor’s background check.

c. The contractor shall submit to the University HDS Project Manager the names of the individuals proposed for the project and a confirmation for each that these individuals have passed the required background check. This list must be certified by an officer of the company by signature. Questions in regards to the results of the background check should be addressed to the CU representative for the project who will then escalate internally as necessary.

Scheduling and Planning

1. Weekly construction meetings will review contractor’s need to access residential space, approximate dates, locations, time periods and define specific space where contractors need access.

2. University shall provide dates in which no construction shall take place, or times of work that need to be modified temporarily.

3. Contractor shall refer to General Rules, Section 3, when establishing their planning and scheduling of the project.

Communication

1. The Project Architect and/or person responsible for weekly construction meeting minutes is required to record security, Fire & Life Safety, Environmental Health & Safety, scheduling and student service concerns in the minutes. In addition, a separate meeting may be held as required between the residents and Department of Housing during construction. The notes from these meetings shall also be attached to the weekly construction meeting minutes. It is the responsibility of the contractor to
respond promptly to correct any identified security issues and provide the University Project Manager with an update regarding the status within 24 hours of notification.

Weekly construction meetings will require the contractor to review all required residential access processes and shut down of utilities for upcoming work required. Contractor will be required to provide times, dates and location of work and what impact if any to the student residents. Appropriate security will be required and will need to be coordinated with the University Project Manager.

2. The Contractor, Architect and University Project Manager shall all use their best efforts to inform all workers, subcontractors, deliverymen and anyone else coming on to the work site that matters about the project and related security issues should first be communicated to the Contractor's Superintendent. The Contractor's Superintendent should then only discuss the issues with the University Project Manager and/or his/her designate. Such communications should not be addressed to students or employees of the residence hall or apartment complex. The University Project Manager shall be responsible for communicating matters to the residence hall's or apartment’s staff, as necessary or appropriate.

THESE GENERAL RULES ARE SUBJECT TO REVISION AND CHANGE WITHOUT QUALIFICATION. CHANGES AND REVISIONS WILL BE COMMUNICATED TO CONTRACTORS WHEN THEY ARE MADE.
RECEIPT OF SPECIAL CONTRACT CONDITIONS
FOR
CONSTRUCTION PROJECTS IN OCCUPIED STUDENT HOUSING

Project Name

Project Number

Project Location

University Project Manager (Print Name)

I acknowledge receipt of the Special Contract Conditions for Construction Projects in Occupied Student Housing. I also acknowledge receipt of the University of Colorado Sexual Harassment Policy.

I understand it is my responsibility to abide by the provisions described in this document.

Name (Print)

Company

Signature

Date
STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAMS

BID

Institution/Agency: University of Colorado Boulder
Project No./Name: PR007793/HSG10818 CAMP - WV - Elevator Modernization - Phase II

Bidder Acknowledges Receipt of Addenda Numbers:

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<th>Base Bid</th>
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Bidder’s Time of Completion

a. Time Period from Notice to Proceed to Substantial Completion: 80 calendar days
b. Time Period from Substantial Completion to Final Acceptance: 3 calendar days
c. Total Time of Completion of Entire Project (a + b): 83 calendar days

1. BID: Pursuant to the advertisement by the State of Colorado dated 12/16/2013, 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. For State Public Works, not less than eighty percent of the labor employed on such projects shall consist of Colorado Labor C.R.S 8-17-101.

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 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.

Dated this Day of , 20

THE BIDDER:

Company Name

Address (including city, state and zip)
Phone number: Email Address:

Signature

Name (Print) and Title

SIGNATURES: If the Bid is being submitted by a Corporation, the Bid should 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.

State Form SBP-6.13
Rev. 7/2010
KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the Principal, 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., 2013.

(Corporate Seal)  

THE PRINCIPAL

Company Name

Address (including city, state and zip)

Phone number:

_________________________  

ATTEST

Secretary

_________________________  

Signature

_________________________  

Name (Print) and Title

Email address:

_________________________  

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)  

THE SURETY

_________________________  

Secretary

_________________________  

By

_________________________  

Attorney-in-Fact

_________________________  

Email address:

_________________________  

______________

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.
NOTICE OF AWARD

Date of Notice: ________________________________

Date to be inserted by the Principal Representative

Institution/Agency: University of Colorado Boulder

Project No./Name: PR007793/HSG10818 CAMP – WV – Elevator Modernization - Phase II

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 Thousand, $ * and no/100 Dollars* ($ *) is hereby accepted, pending final execution of the Agreement.

Base Bid $ Total Contract Amount $ *

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 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 and Certificates of Insurance, and Certification and Affidavit Regarding Unauthorized Immigrants 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 ________________________________________  By ________________________________________

State Buildings Programs (Authorized Delegate)  Principal Representative (Institution or Agency)
William N. Ward, AIA  Ronald L. Ried, Director
Interim Director, Planning, Design & Construction Facilities Management Business Services

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

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

CONTRACT ID NUMBER:

AGENCY IDENTIFICATION NUMBER:

PROJECT NUMBER: PR007793/HSG10818

PROJECT NAME: CAMP – WV – Elevator Modernization – Phase II

PROJECT MANAGER: Jon C. Keiser

CONTRACTOR:
# STATE OF COLORADO
CONTRACTOR’S DESIGN/BID/BUILD AGREEMENT
(STATE FORM SC-6.21)

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## SIGNATURE APPROVALS

Attachment: Signed Notice of Award

### Exhibits:

- A Contractor's Bid (Form SC-6.13)
- B Performance Bond (Form SC-6.22)
- C Labor and Material Payment Bond (Form SC-6.221)
- D Insurance Certificates
- E Certification and Affidavit Regarding Unauthorized Immigrants (required at contract signing prior to commencing work)
- F Contract Management Information Construction Contractor

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Rev. 7/2013/10/2013 1 of 1
SC-6.21
STATE OF COLORADO
CONTRACTOR’S DESIGN/BID/BUILD (D/B/B) AGREEMENT
(STATE FORM SC-6.21)

Agency I.D. No.: __________ Contract ID No.: __________ Project No. PR007793/HSG10818

1. PARTIES. THIS AGREEMENT is entered into by and between the STATE OF COLORADO, acting by and through the Regents of the University of Colorado, a body corporate, hereinafter referred to as the Principal Representative, and having its offices at hereinafter referred to as the Contractor.

2. 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 Contractor for any performance hereunder or be bound by any provision hereof prior to the Effective Date.

WHEREAS, the Principal Representative intends to modernize and upgrade 2 (two) elevator cars (shared hoistway) in Stearns Towers West and 2 (two) elevator cars (shared hoistway) in Darley Towers South. Hereinafter called the Project; and

WHEREAS, authority exists in Law and Funds have been budgeted, appropriated, and otherwise made available, and a sufficient unencumbered balance thereof remains available for payment in Fund Number /Account Number ______, Contract Encumbrance Number ____________, and

WHEREAS, this is a phase one waived contract, waiver number 156 Contractors Agreement for Capital Construction Form SC6.21.

WITNESSETH, that the State of Colorado and the Contractor agree as follows:

ARTICLE 1. PERFORMANCE OF THE WORK
The Contractor shall perform all of the Work required for the complete and prompt execution of everything described or shown in, or reasonably implied from the Contract Documents for the above referenced Project.

ARTICLE 2. PROVISIONS OF THE CONTRACT DOCUMENTS
The Contractor agrees to perform the Work to the highest industry standards and to the satisfaction of the State of Colorado and its Architect/Engineer in strict accordance with the provisions of the Contract Documents.

ARTICLE 3. TIME OF COMPLETION
The Contractor agrees to Substantially Complete the Project within 80 calendar days from the date of the Notice to Proceed, in addition, the Contractor agrees to finally complete the Project from Substantial Completion to Final Acceptance within 3 calendar days for a total time of completion of the entire Project of 83 calendar days. The Contractor shall perform the Work with due diligence to completion.

ARTICLE 4. ESSENTIAL CONDITION
Timely completion of the Project is an essential condition of this Agreement. The Contractor shall be subject to any liquidated damages described in Article 7D for failure to satisfactorily complete the Work within the time periods in Article 3 above.

ARTICLE 5. CONTRACT SUM
The Contractor shall be paid for the performance of this Agreement, subject to any additions and deductions as provided for in Articles 32, 34 and 35 of The General Conditions of the Construction Contract SC-6.23, the sum of and no/100 Dollars* ($ ______

Base Bid: $________
Total Contract Amount $________

*
ARTICLE 6. CONTRACT DOCUMENTS
The Contract Documents, as enumerated in Article 1 of The General Conditions of the Contractor's Design/Bid/Build (D/B/B) Agreement SC-6.23, are all essential parts of this Agreement and are fully incorporated herein.

The General Conditions of the Construction Contract & Supplementary General Conditions can be found at http://www.colorado.edu/facilitiesmanagement/pdc/construction/forms.html

ARTICLE 7. OPTIONAL PROVISIONS AND ELECTIONS
The provisions of this Article 7 alter the Articles (The General Conditions of the Contractor's Design/Bid/Build Agreement SC-6.23) or enlarge upon them as indicated:
The Principal Representative and/or the State Buildings Programs shall mark boxes and initial where applicable.

A. MODIFICATION OF ARTICLE 45. GUARANTEE INSPECTIONS AFTER COMPLETION
If the box below is marked the six month guarantee inspection is not required.
☐ ______ Principal Representative initial

B. MODIFICATION 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 initial

C. 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 Contract. 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 contract shall be similarly deleted.
The box may be marked only for projects with an estimated value of less than $500,000.
☐ ______ Principal Representative initial

D. 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 The General Conditions of the Design/Bid/Build Agreement 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 parties right to damages only to the extent noted.

1. For the inability to use the Project, for each day after the number of calendar days specified in the Contractor's bid 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 Contractor agrees that an amount equal to One Thousand Five Hundred Dollars and no cents ($1500.00) shall be assessed against Contractor from amounts due and payable to the Contractor under the Contract, or the Contractor and the Contractor'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.

2. 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 Contractor’s bid 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 Contractor agrees that an amount equal to Five Hundred Dollars and no cents ($500.00) shall be assessed against Contractor from amounts due and payable to the Contractor under the Contract, or the Contractor and the Contractor’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.
E. NOTICE IDENTIFICATION
All Notices pertaining to General Conditions 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:

With copies to (State Buildings Programs (or Delegate) State of Colorado):

Notice to Contractor:

With copies to: FM Accounting

ARTICLE 8. SAFETY and SECURITY – “Contractor understands that concern for the safety and well-being of
University students and staff is of particular importance to the University. Contractor expressly acknowledges that it
is Contractor’s duty to take reasonable precautions to protect the University’s students and staff. The extent of
such precautions will depend on the particular circumstances of the work to be performed. However, to the extent
that work to be performed involves security-sensitive functions or security-sensitive areas (e.g. unsupervised
access to minors or work involving access to security-sensitive data), such precautions may include, but are not
limited to, conducting criminal history checks on employees or agents assigned to such work at the University.”
SIGNATURE APPROVALS:

THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

*Persons signing for Contractor 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: PR007758/HSG10810  Stearns East Bathroom Renovations – 61 stack
Contract ID No.: ____________________________

THE CONTRACTOR

STATE OF COLORADO, acting by and through:
The Regents of the University of Colorado Boulder, A Body Corporate

By: __________________________________________________________________________________

Ronald L. Ried, Director
Facilities Management Business Services

Date: ________________________________________________________________________________

*Signature

By ____________________________
Name (print) Title

Date: ________________________________________________________________________________

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

By: __________________________________________________________________________________

William N. Ward, AIA
Interim Director, Planning, Design & Construction

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: __________________________________________________________________________________

Laura Ragin, Controller
Accounting & Business Support

Date: ________________________________________________________________________________
STATE OF COLORADO
CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT
(STATE FORM SC-6.21)

EXHIBIT A

CONTRACTOR’S BID (Form SBP-6.13)
STATE OF COLORADO
CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT
(STATE FORM SC-6.21)

EXHIBIT B

PERFORMANCE BOND (Form SC-6.22)
STATE OF COLORADO
CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT
(STATE FORM SC-6.21)

EXHIBIT C

LABOR AND MATERIAL PAYMENT BOND (Form SC-6.221)
EXHIBIT D

INSURANCE CERTIFICATE(S) (attached)
Certification and Affidavit Regarding Unauthorized Immigrants (required at contract signing prior to commencing work) (UI-1, attached)
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 the ___________ are held and firmly bound unto the STATE OF COLORADO acting by and through the Regents of the University of Colorado, a body corporate, hereinafter called the “Principal Representative”, in the sum of $__________

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 ________________, 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 herebefore 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. __________.

(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.
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 the Regents of the University of Colorado, a body corporate, hereinafter called the "Principal Representative", in the sum of ____________ Dollars ($_______________)

and 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 _______________ 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 forebearance 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.
THE GENERAL CONDITIONS OF THE CONTRACTOR'S DESIGN/BID/BUILD (D/B/B) AGREEMENT
(STATE FORM SC-6.23)
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Note: The sections of the General Conditions indicated in *italics* (Articles 35 General and 35A, 35B, 37, 38, 46, 48B, 49 and 50) are regulatory and cannot be modified except through appropriate rule making procedures through the Division of Finance and Procurement, Department of Personnel & Administration.
General Conditions of the Contractor’s Design/Bid/Build Agreement

ARTICLE 1. DEFINITIONS

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

1. Contractor’s Design/Bid/Build Agreement; (SC-6.21);
2. Performance Bond (SC-6.22) and Labor and Material Payment Bond (SC-6.221);
3. General Conditions of the Contractor’s Design/Bid/Build Agreement (SC-6.23) and if applicable, Supplementary General Conditions;
4. Detailed Specification Requirements, including all addenda issued prior to the opening of the bids; and,
5. Drawings, including all addenda issued prior to the opening of the bids.
6. Change Orders (SC-6.31) and Amendments (SC-6.0), if any, when properly executed.
7. Authorization to Bid (SBP-6.10)
8. Information for Bidders (SBP-6.12);
9. Bid (SBP-6.13);
10. Bid Bond (SBP-6.14);
11. Notice of Award (SBP-6.15);
12. Builder’s risk insurance certificates of insurance (ACORD 25-S);
13. Liability and workers’ compensation certificates of insurance;
14. Notice to Proceed (Design/Bid/Build) (SBP-6.26);
15. Notice of Approval of Occupancy/Use (SBP-01);
16. Notice of Partial Substantial Completion (SBP-071);
17. Notice of Substantial Completion (SBP-07);
18. Notice of Partial Final Acceptance (SC-6.27);
19. Notice of Final Acceptance (SBP-6.271);
20. Notice of Partial Contractor's Settlement (SC-7.3);
21. Notice of Contractor's Settlement (SBP-7.31);
22. Application and Certificate for Contractor's Payment (SBP-7.2);
23. Other procedural and reporting documents or forms referred to in the General Conditions, the Supplementary General Conditions, the Specifications or required by the State Buildings Programs 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 Programs forms applicable to this Contract may be obtained from the Principal Representative on request.

B. DEFINITIONS OF WORDS AND TERMS USED
1. 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.

2. 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.

3. 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 state shall have no right to occupy and the project may not be considered safe for occupancy for the intended use.

4. CHANGE ORDER. The term “Change Order” means a written order, signed by a Procurement Officer, directing the Contractor to make changes in the Work, in accordance with Article 35A, The Value of Changed Work.

5. COLORADO LABOR. The term “Colorado labor” shall be defined, as provided in § 8-17-101, C.R.S., as any person who is a resident of the state of Colorado, at the time of employment, without discrimination as to race, color, creed, sex, age, or religion except when sex or age is a bona fide occupational qualification, or shall have such other meaning as the term may otherwise be given in § 8-17-101, C.R.S., as amended.

6. CONTRACTOR. The word “Contractor” shall mean the person, company, firm, corporation or other legal entity entering into a contract with the State of Colorado acting by and through the Principal Representative.

7. 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.

8. DRAWINGS. The term “Drawings” shall mean all drawings approved by appropriate State officials which have been prepared by the Architect/Engineer 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.

9. 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 35C 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 35C.

10. 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.

11. 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 7E (Contractor’s Agreement SC-6.21), 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 7E (Contractor’s Agreement SC-6.21). 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.
12. OWNER. The term “Owner” shall mean the Principal Representative.

13. PRINCIPAL REPRESENTATIVE. The term “Principal Representative” shall be defined, as provided in § 24-30-1301(11), C.R.S., 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 § 24-30-1301(11), C.R.S., as amended. The Principal Representative may delegate authority. The Contractor 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.

14. PROCUREMENT OFFICER. The term “Procurement Officer” means any person duly authorized to enter into and administer contracts and make written determinations with respect thereto. “Procurement Officer” includes an authorized representative of the Principal Representative acting within the limits of his or her authority.

15. PRODUCT DATA. The term “Product Data” shall mean all submittals in the form of printed manufacturer’s literature, manufacturer’s specifications, and catalog cuts.

16. 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 Contractor 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. The phrase shall not, however, be construed to make the Contractor, rather than the Architect/Engineer, responsible for producing the Drawings and Specifications.

17. SAMPLES. The term “Samples” shall mean examples of materials or work provided to establish the standard by which the Work will be judged.

18. SC. The term “SC” means “State Contract” which is used in connection with labeling applicable State form documents (e.g. “SC 6.23” is the State form number for these General Conditions of the Contractor’s Design/Bid/Build Agreement).

19. SBP. The term “SBP” means “State Buildings”, 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).

20. SHOP DRAWINGS. The term “Shop Drawings” shall mean any and all detailed drawings prepared and submitted by Contractor, Subcontractor at any tier, vendors or manufacturers providing the products and equipment specified on the Drawings or called for in the Specifications.

21. SPECIFICATIONS. The term “Specifications” shall mean the requirements of the CSI divisions of the project manual prepared by the Architect/Engineer describing the work to be accomplished.

22. STATE BUILDINGS PROGRAMS. 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 compliance and inspection of all buildings, 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 § 24-30-1301, et seq, C.R.S. The term State Buildings Programs 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 Programs.

23. SUBMITTALS. The term “submittals” means drawings, lists, tables, documents and samples prepared by the Contractor 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.

24. 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.

25. SURETY. The term “Surety” shall mean the company providing the labor and material payment and performance bonds for the Contractor as obligor.

26. 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 Contractor to meet the Contractor's obligations under the Contract.

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

A. EXECUTION
The Contractor, within ten (10) days from the date of Notice of Award, will be required to:
1. Execute the Agreement, State Form SC-6.21;
2. Furnish fully executed Performance and Labor and Material Payment Bonds on State Forms SC-6.22 and SC-6.221; and
3. Furnish certificates of insurance evidencing all required insurance on standard Acord forms designed for such purpose.
4. Furnish certified copies of any insurance policies requested by the Principal Representative.

B. CORRELATION
By execution of the Agreement the Contractor represents that the Contractor 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.

C. 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.

In any event, if any error exists, or appears to exist, in the requirements of the Drawings or Specifications, or if any disagreement exists as to such requirements, the Contractor shall have the same explained or adjusted by the Architect/Engineer before proceeding with the work in question. In the event of the Contractor’s failure to give prior written Notice of any such errors or disagreements of which the Contractor or the Subcontractors at any tier are aware, the Contractor shall, at no additional cost to the Principal Representative, make good any damage to, or defect in, work which is caused by such omission.

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 Architect/Engineer 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:

1. The Agreement (SC-6.21);
2. The Supplementary General Conditions, if any;
3. The General Conditions (SC-6.23); and
4. Drawings and Specifications, all as modified by any addenda.

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

Notwithstanding the foregoing order of precedence, the Special Provisions of Article 52 of the General Conditions, Special Provisions, 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 Contractor may obtain State forms from the Principal Representative upon request.

D. PARTNERING, COMMUNICATIONS AND COOPERATION

In recognition of the fact that conflicts, disagreements and disputes often arise during the performance of construction contracts, the Contractor 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 Contractor 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 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.

ARTICLE 3. COPIES FURNISHED
The Contractor will be furnished, free of charge, the number of copies of Drawings and Specifications as specified in the Contract Documents, or if no number is specified, all copies reasonably necessary for the execution of the work.

ARTICLE 4. OWNERSHIP OF DRAWINGS
Drawings or Specifications, or copies of either, furnished by the Architect/Engineer, are not to be used on any other work. At the completion of the Work, at the written request of the Architect/Engineer, the Contractor shall endeavor to return all Drawings and Specifications.

The Contractor may retain the Contractor’s Contract Document set, copies of Drawings and Specifications used to contract with others for any portion of the Work and a marked up set of as-built drawings.

ARTICLE 5. ARCHITECT/ENGINEER’S STATUS
The Architect/Engineer is the representative of the Principal Representative for purposes of administration of the Contract, as provided in the Contract Documents and the Agreement. In case of termination of
employment or the death of the Architect/Engineer, the Principal Representative will appoint a capable Architect/Engineer against whom the Contractor makes no reasonable objection, whose status under the Contract shall be the same as that of the former Architect/Engineer.

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

A. DECISIONS
The Architect/Engineer shall, within a reasonable time, make decisions on all matters relating to the execution and progress of the Work or the interpretation of the Contract Documents, and in the exercise of due diligence shall be reasonably available to the Contractor to timely interpret and make decisions with respect to questions relating to the design or concerning the Contract Documents.

B. 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.

The Architect/Engineer shall make judgments regarding whether directed work is extra or outside the scope of Work required by the Contract Documents at the time such direction is first given. If, in the Contractor's judgment, any performance directed by the Architect/Engineer is not required by the Contract Documents or if the Architect/Engineer does not make the judgment required, it shall be a condition precedent to the filing of any claim for additional cost related to such directed work that the Contractor, before performing such work, shall first obtain in writing, the Architect/Engineer's written decision that such directed work is included in the performance required by the Contract Documents. If the Architect/Engineer's direction to perform the work does not state that the work is included in the performance required by the Contract Documents, the Contractor shall, in writing, request the Architect/Engineer to advise in writing whether the directed work will be considered extra work or work included in the performance required by the Contract Documents.

The Architect/Engineer shall respond to any such written request for such a decision within three (3) business days and if no response is provided, or if the Architect/Engineer's written decision is to the effect that the work is included in the performance required by the Contract Documents, the Contractor may file with the Principal Representative and the Architect/Engineer a Notice of claim in accordance with Article 36, Claims. Whether or not a Notice of claim is filed, the Contractor shall proceed with the ordered work. Disagreement with the decision of the Architect/Engineer shall not be grounds for the Contractor to refuse to perform the work directed or to suspend or terminate performance.

C. ACCESS TO WORK
The Architect/Engineer, the Principal Representative and representatives of State Buildings Programs shall at all times have access to the work. The Contractor shall provide proper facilities for such access and for their observations or inspection of the work.

D. INSPECTION
The Architect/Engineer has agreed to make, or that structural, mechanical, electrical engineers or other 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. 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 Architect/Engineer or the Contractor, the Architect/Engineer has agreed to observe, among other aspects of the Work, the following for compliance with the Contract Documents:

1. Bearing surfaces of excavations before concrete is placed based upon the findings and recommendations of the Principal Representative’s soils engineering consultant;
2. Reinforcing steel after installation and before concrete is poured;
3. Structural concrete;
4. Laboratory reports on all concrete testing based upon the findings and recommendations of the Principal Representative’s testing consultant;
5. Structural steel during and after erection and prior to its being covered or enclosed;
6. Steel welding; Principal Representative will furnish steel welding inspection consultant/agency if required or necessary for the project;
7. Mechanical and plumbing work following its installation and prior to its being covered or enclosed;
8. Electrical work following its installation and prior to its being covered or enclosed;
9. Compaction testing reports based upon the findings and recommendations of the Principal Representative’s testing consultant; and
10. 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 Contractor shall give the Architect/Engineer timely notice of its readiness for observation by the 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 Contractor. The Contractor 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 Contractor 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 such work is covered up without approval or consent of the Architect/Engineer or prior to any building code inspection, it must, if required by the Architect/Engineer, the Principal Representative or the State Buildings Programs, be uncovered for examination, at the Contractor's expense. If such work is found to be not in accordance with the Contract Documents, the Contractor shall pay such costs, unless he or she shall show that the defect in the work was caused by another contractor engaged by the Principal Representative. In that event, the Principal Representative shall pay such cost. In addition, examination of questioned work may be ordered, and if so ordered, the work must be uncovered by the Contractor. If such work be found in accordance with the Contract Documents, the Contractor shall be reimbursed the cost of examination and replacement.

ARTICLE 7. CONTRACTOR’S SUPERINTENDENCE AND SUPERVISION
The Contractor shall employ, and keep present on the Project during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Architect/Engineer and the Principal Representative. The superintendent shall not be changed except with the consent of the Architect/Engineer and the Principal Representative, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his or her employ. The superintendent shall represent the Contractor in his or her absence and all directions given to the superintendent shall be as binding as if given to the Contractor. Directions received by the superintendent shall be documented by the superintendent and confirmed in writing with the Contractor.

The Contractor 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 Architect/Engineer. The Contractor shall not be liable to the Principal Representative for damage to the extent it results from errors or deficiencies in the Contract Documents or other instructions by the Architect/Engineer, unless the Contractor knew or had reason to know, that damage would result by proceeding and the Contractor fails to so advise the 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 Contractor's superintendent shall establish all lines, levels, and marks necessary to facilitate the operations of all concerned in the Contractor's Work. The Contractor shall lay out all work in a manner satisfactory to the Architect/Engineer, making permanent...
records of all lines and levels required for excavation, grading, foundations, and for all other parts of the Work.

ARTICLE 8. MATERIALS AND EMPLOYEES
Unless otherwise stipulated, the Contractor 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 Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor is fully responsible for all acts and omissions of the Contractor’s employees and shall at all times enforce strict discipline and good order among employees on the site. The Contractor 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.

ARTICLE 9. SURVEYS, PERMITS, LAWS, TAXES AND REGULATIONS
A. SURVEYS
The Principal Representative shall furnish all surveys, property lines and bench marks deemed necessary by the Architect/Engineer, unless otherwise specified.

B. PERMITS AND LICENSES
Permits and licenses necessary for the prosecution of the Work shall be secured and paid for by the Contractor. Unless otherwise specified in the Specifications, no local municipal or county building permit shall be required. However, State Buildings Programs 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 Contractors’ 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 Contractor 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.

C. TAXES
1. REFUND OF SALES AND USE TAXES
The Contractor 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 Contractor shall maintain records of such payments in respect to the Work, which shall be separate and distinct from all other records maintained by the Contractor, and the Contractor 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 Contractor 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 Contractor 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 a Contractor or to a Subcontractor at any tier, a certificate or certificates of exemption per § 39-26-114(1)(d), C.R.S., and § 39-26-203, C.R.S.

2. FEDERAL TAXES
The Contractor shall exclude the amount of any applicable federal excise or manufacturers’ taxes from the proposal. The Principal Representative will furnish the Contractor, on request exemption certificates.

D. LAWS AND REGULATIONS
The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn or specified. If the Contractor observes that the Drawings or Specifications require work which is at variance therewith, the Contractor shall without delay notify the Architect/Engineer in writing and any necessary changes shall be adjusted as provided in Article 35, Changes In The Work.

The Contractor shall bear all costs arising from the performance of work required by the Drawings or Specifications that the Contractor knows to be contrary to such laws, ordinances, rules or regulations, if such work is performed without giving Notice to the Architect/Engineer.

ARTICLE 10. PROTECTION OF WORK AND PROPERTY

A. GENERAL PROVISIONS
The Contractor 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 Contractor shall make good any damage, injury or loss, except to the extent:

1. Directly due to errors in the Contract Documents;
2. Caused by agents or employees of the Principal Representative; and,
3. Due to causes beyond the Contractor’s control and not to fault or negligence; provided such damage, injury or loss would not be covered by the insurance required to be carried by the Contractor;

B. SAFETY PRECAUTIONS
The Contractor 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 Architect/Engineer by the Contractor.

The Contractor 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 during the execution of this Contract; and provide for the adequacy and safety of all scaffolding and hoisting equipment. The Contractor shall not permit open fires within the building enclosure. The Contractor 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 Contractor 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 Contractor 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.
C. EMERGENCIES
In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor without special instruction or authorization from the Architect/Engineer or 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 Contractor has no responsibilities for the emergency, if the Contractor incurs additional cost not otherwise recoverable from insurance or others on account of any such emergency work, the Contract sum shall be equitably adjusted in accordance with Article 35, Changes In The Work.

ARTICLE 11. DRAWINGS AND SPECIFICATIONS ON THE WORK
The Contractor 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 Contractor and Subcontractors to reflect actual constructed conditions including dimensioned locations of underground work and the Contractor'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 the Architect/Engineer and representatives of the State. In addition, the Contractor shall keep on the job site one copy of all approved addenda, Change Orders and requests for information issued for the Work.

The Contractor 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.

ARTICLE 12. REQUESTS FOR INFORMATION AND SCHEDULES
A. REQUESTS FOR INFORMATION
The Architect/Engineer shall furnish additional instructions with reasonable promptness, 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 and reasonably inferable therefrom. The Architect/Engineer shall determine what additional instructions or drawings are necessary for the proper execution of the Work.

The Work shall be executed in conformity with such instructions and the Contractor shall do no work without proper drawings, specifications or instructions. If the Contractor believes additional instructions, specifications or drawings are needed for the performance of any portion of the Work, the Contractor shall give Notice of such need in writing through a request for information furnished to the Architect/Engineer sufficiently in advance of the need for such additional instructions, specifications or drawings to avoid delay and to allow the Architect/Engineer a reasonable time to respond. The Contractor shall maintain a log of the requests for information and the responses provided.

B. SCHEDULES
1. SUBMITTAL SCHEDULES
Prior to filing the Contractor’s first application for payment, a schedule shall be prepared which may be preliminary to the extent required, 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 contractor. 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 Architect/Engineer. It shall fix the dates at which the various Shop Drawings Product Data and Samples will be required from the Architect/Engineer. The Architect/Engineer, after review and agreement as to the time provided for initial review, shall review and comment on the Shop Drawings, Product Data and Samples in accordance with that schedule. 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 or installation.
At the time the schedule is prepared, the Contractor, the Architect/Engineer and Principal Representative shall jointly identify the Shop Drawing, Product Data and Samples, if any, which the Principal Representative shall receive simultaneously with the Architect/Engineer for the purposes of owner coordination with existing facility standards and systems. The Contractor 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.

The Contractor may also, or at the direction of the Principal Representative at any time shall, prepare and maintain a schedule, which may also be preliminary and subject to change to the extent required, fixing the dates for the initial responses to requests for information or for detail drawings which will be required from the Architect/Engineer to allow the beginning of manufacture, installation of materials and for the completion of the various parts of the Work. The schedule shall be subject to review and approval by the Architect/Engineer. The Architect/Engineer shall, after review and agreement, furnish responses and detail drawings in accordance with that schedule. Any such schedule shall be prepared and approved in time to avoid delay, considering reasonable periods for review, manufacture or installation, but so long as the request for information schedule is being maintained, it shall not be deemed to transfer responsibility to the Contractor for errors or omissions in the Contract Documents where circumstances make timely review and performance impossible.

The Architect/Engineer shall not unreasonably withhold approval of the Contractor’s schedules and shall inform the Contractor and the Principal Representative of the basis of any refusal to agree to the Contractor’s schedules. The Principal Representative shall attempt to resolve any disagreements.

2. SCHEDULE OF VALUES
Within twenty-one (21) calendar days after the date of the Notice to Proceed, the Contractor shall submit to the Architect/Engineer and Principal Representative, for approval, and to the State Buildings Programs when specifically requested, a complete itemized schedule of the values of the various parts of the Work, as estimated by the Contractor, aggregating the total price. The schedule of values shall be in such detail as the Architect/Engineer or the Principal Representative shall require, prepared on forms acceptable to the Principal Representative. 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 Contractor shall revise and resubmit the schedule of values for approval when, in the opinion of the Architect/Engineer or the Principal Representative, such resubmittal is required due to changes or modifications to the Contract Documents or the Contract sum.

The total cost of each line item so separately identified shall, when requested by the Architect/Engineer or the Principal Representative, be broken down into reasonable estimates of the value of:
- Material, which shall include the cost of material actually built into the Project plus any local sales or use tax paid thereon; and,
- Labor and other costs.

The cost of subcontracts shall be incorporated in the Contractor’s schedule of values, and when requested by the Architect/Engineer or the Principal Representative, shall be separately shown as line items.

The Architect/Engineer shall review the proposed schedules and approve it after consultation with the Principal Representative, or advise the Contractor of any required revisions within ten (10) days of its receipt. In the event no action is taken on the submittal within ten days, the
Contractor may utilize the schedule of values as its submittal for payment until it is approved or until revisions are requested.

When the Architect/Engineer deems it appropriate to facilitate certification of the amounts due to the Contractor, further breakdown of subcontracts, including breakdown by labor and materials, may be directed.

This schedule of values, when approved, will be used in preparing Contractor’s applications for payment on State Form SC-7.2, Application for Payment.

3. CONSTRUCTION SCHEDULES

Within twenty-one (21) calendar days after the date of the Notice to Proceed, the Contractor shall submit to the Architect/Engineer and the Principal Representative, and to the State Buildings Programs 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 Contractor’s schedule shall be a critical-path method (CPM) construction schedule. The CPM schedule shall start with the date of the Notice to Proceed 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 shall at a minimum correlate to the schedule of values line items and shall be cost loaded if requested by the Architect/Engineer or 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 Agreement on State Form SC 6.13, 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 Contractor shall submit monthly updates of the construction schedule. These updates shall reflect the Contractor’s “work in place” progress.

When requested by the Architect/Engineer, the Principal Representative or the State Buildings Programs, the Contractor shall revise the construction schedule to reflect changes in the schedule of values.

When the testing of materials is required by the Specifications, the Contractor shall also prepare and submit to the Architect/Engineer and the Principal Representative a schedule for testing in accordance with Article 14, Samples and Testing.

ARTICLE 13. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

A. SUBMITTAL PROCESS

The Contractor shall check and field verify all dimensions. The Contractor shall check, approve and submit to the 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 Contractor 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 Contractor for such corrections. If a change in the scope of the Work is intended by revisions requested to any Shop Drawings and Product Data, the Contractor shall be requested to prepare a change proposal in accordance with Article 35, Changes In The Work. On resubmitted Shop Drawings, Product Data or Samples, the Contractor 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, the resubmitted items.

The Contractor shall thereafter furnish such other copies in the form approved by the Architect/Engineer as may be needed for the prosecution of the work.

B. FABRICATION AND ORDERING
Fabrication shall be started by the Contractor 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.

C. DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS
The review and comments of the Architect/Engineer of Shop Drawings, Product Data or Samples shall not relieve the Contractor from responsibility for deviations from the Drawings or Specifications, unless he or she has in writing called the attention of the Architect/Engineer to such deviations at the time of submission, nor shall it relieve the Contractor 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 Architect/Engineer and Principal Representative of all additional costs, time and other impacts of the identified deviation by bring it to their attention in writing at the time the submittals are made, and any subsequent change in the Contract sum or the Contract time shall be limited to cost, time and impacts so identified.

D. CONTRACTOR REPRESENTATIONS
By preparing, approving, and/or submitting Shop Drawings, Product Data and Samples, the Contractor represents that the Contractor has determined and verified all materials, field measurements, and field construction criteria related thereto, and has checked and co-ordinated the information contained within each submittal with the requirements of the Work, the Project and the Contract Documents and prior reviews and approvals.

ARTICLE 14. SAMPLES AND TESTING
A. SAMPLES
The Contractor shall furnish for approval, with such promptness as to cause no delay in his or her work or in that of any other Contractor, all Samples as directed by the Architect/Engineer. The Architect/Engineer 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.

B. TESTING - GENERAL
The Contractor shall provide such equipment and facilities as the Architect/Engineer 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.

All materials or equipment proposed to be used may be tested at any time during their preparation or use. The Contractor 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 Contractor if so directed by the Architect/Engineer, and the Contract sum 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 Contractor.

C. 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 Contractor shall assume the responsibility of arranging, scheduling and coordinating the concrete sample collection efforts and soils compaction efforts. Testing shall be performed in accordance with the requirements of the Specifications, and if no requirements are specified, the Contractor 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.

D. 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 Contractor 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 Contractor shall give the Principal Representative not less than one month advance written Notice of the date the first such test will be required.

ARTICLE 15. SUBCONTRACTS

The Contractor shall, within twenty one (21) days after the date of the Notice of Award, submit to the Architect/Engineer, the Principal Representative and State Buildings Programs a preliminary list of Subcontractors. It shall be as complete as possible at the time, showing all known Subcontractors planned for the work. The list shall be supplemented as other Subcontractors are determined by the Contractor and any such supplemental list shall be submitted to the Architect/Engineer, the Principal Representative and State Buildings Programs not less than ten (10) days before the Subcontractor commences work.

The Contractor's list shall include those Subcontractors, if any, which the Contractor indicated in its bid would be employed for specific portions of the Work if such indication was requested in the bid documents issued by the State. The substitution of any Subcontractor listed in the Contractor's bid shall be justified in writing not less than ten (10) days after the date of the Notice of Award, 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 bid errors, or other similar reasons, but not including the availability of a lower Subcontract price, such substitution may be approved. The Contractor shall bear any additional cost incurred by such substitutions.

The Contractor shall not employ any Subcontractor that the Architect/Engineer, within seven (7) days after the date of receipt of the Contractor's list of Subcontractors or any supplemental list, objects to in writing as being unacceptable to either the Architect/Engineer, the Principal Representative or State Buildings
Programs. If a Subcontractor is deemed unacceptable, the Contractor shall propose a substitute Subcontractor and the Contract sum 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 Contractor 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 Contractor.

ARTICLE 16. RELATIONS OF CONTRACTOR AND SUBCONTRACTOR
The Contractor 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 Contractor 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.

ARTICLE 17. MUTUAL RESPONSIBILITY OF CONTRACTORS
Should the Contractor cause damage to any separate contractor on the work, the Contractor agrees, upon due Notice, to settle with such 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 Contractor, who shall defend such proceedings if requested to do so by Principal Representative. If any judgment against the Principal Representative arises there from, the Contractor shall pay or satisfy it and pay all costs and reasonable attorney fees incurred by the Principal Representative, in accordance with Article 52C, Indemnification, provided the Contractor was given due Notice of an opportunity to settle.

ARTICLE 18. SEPARATE CONTRACTS
The Principal Representative reserves the right to enter into other contracts in connection with the Project or the Contract. The Contractor shall afford other 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 Contractor’s work depends, for proper execution or results, upon the work of any other contractor, the Contractor shall inspect and promptly report to the Architect/Engineer any defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor to so inspect and report shall constitute an acceptance of the other contractor’s work as fit and proper for the reception of work, except as to defects which may develop in the other Contractor’s work after the execution of the Contractor’s work.

To insure the proper execution of subsequent work, the Contractor shall measure work already in place and shall at once report to the Architect/Engineer any discrepancy between the executed work and the Drawings.

ARTICLE 19. USE OF PREMISES
The Contractor 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 Contractor shall not unreasonably encumber the premises with materials.

The Contractor shall enforce all of the Architect/Engineer’s instructions and prohibitions regarding, without limitation, such matters as signs, advertisements, fires and smoking.
ARTICLE 20. CUTTING, FITTING OR PATCHING
The Contractor 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 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 Architect/Engineer may direct. The Contractor shall not endanger any work by cutting, excavating or otherwise altering the work and shall not cut or alter the work of any other Contractor save with the consent of the Architect/Engineer.

ARTICLE 21. UTILITIES
A. 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 Contractor's compliance with all statutory or regulatory requirements to call for utility locates. When actual conditions deviate from those shown the Contractor shall comply with the requirements of Article 37, Differing Site Conditions. The Contractor 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 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 Contractor shall pay for all consumption of power, light and water used by him or her and the other Contractors, without regard to whether such items are metered by temporary or permanent meters. The 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.

B. PROTECTION OF EXISTING UTILITIES
Where existing utilities, such as water mains, sanitary sewers, storm sewers and electrical conduits, are shown on the Drawings, the Contractor 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.

C. 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 Contractor shall secure proper written permission before executing such new construction. The Contractor will be required to furnish a proper release before final acceptance of the Work.

ARTICLE 22. UNSUITABLE CONDITIONS
The Contractor 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 Contractor unless the timing of such work shall have been directed by the Architect/Engineer or the Principal Representative, after the award of the Contract, and the Contractor provided Notice of any additional cost.

ARTICLE 23. TEMPORARY FACILITIES
A. OFFICE FACILITIES
The Contractor shall provide and maintain without additional expense for the duration of the Project temporary office facilities, as required and as specified, for his or her own use and the use of the Architect/Engineer, representatives of the Principal Representative and State Buildings Programs.

B. TEMPORARY HEAT
The Contractor 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 Contractor desires to put the permanent system into use, in whole or in part, the Contractor 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 Contractor 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 Contractor shall provide manufacturers’ extended warranties from the date of the Contractor’s use prior to the date of the Notice of Substantial Completion.

C. WEATHER PROTECTION
The Contractor shall, at all times, provide protection against weather, so as to maintain all work, materials, apparatus and fixtures free from injury or damages.

D. DUST PARTITIONS
If the Work involves work in an occupied existing building, the Contractor 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.

E. BENCH MARKS
The Contractor shall maintain any site bench marks provided by the Principal Representative and shall establish any additional benchmarks specified by the Architect/Engineer as necessary for the Contractor to layout the work and ascertain all grades and levels as needed.

F. SIGN
The Contractor shall erect and permit one 4’ x 8’ sign only at the site to identify the Project as specified or directed by the Architect/Engineer which shall be maintained in good condition during the life of the Project.

G. SANITARY PROVISION
The Contractor 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 Contractor 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 any contractor.

ARTICLE 24. CLEANING UP
The Contractor 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.

ARTICLE 25. INSURANCE
A. GENERAL
The Contractor 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 Contractor 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 Programs 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”.

B. COMMERCIAL GENERAL LIABILITY INSURANCE (CGL)
This insurance must protect the Contractor 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 Contractor or by any Subcontractor under him or anyone directly or indirectly employed by the Contractor 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.

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Aggregate</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Products – Completed Operations Aggregate</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Each Occurrence</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Personal Injury</td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>

The following coverages shall be included in the CGL:

1. Per project general aggregate (CG 25 03 or similar)
2. 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.
3. The policy shall be endorsed to be primary and non-contributory with any insurance maintained by Additional Insureds.
4. A waiver of Subrogation in favor of all Additional Insured parties.
5. Personal Injury Liability
6. Contractual Liability coverage to support indemnification obligation per Article 53.I
7. Explosion, collapse and underground (xcu)

The following exclusionary endorsements are prohibited in the CGL policy:

1. Damage to Work performed by Subcontract/Vendor (CG 22-94 or similar)
2. 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)
3. If applicable to the Work to be performed: Residential or multi-family
4. If applicable to the Work to be performed :Exterior insulation finish systems
5. If applicable to the Work to be performed: Subsidence or Earth Movement

The Contractor 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.

C. AUTOMOBILE LIABILITY INSURANCE 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

D. WORKERS’ COMPENSATION INSURANCE
The Contractor 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 Contractor 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 Contractor 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 Contractor shall provide, and shall cause each Subcontractor to provide, adequate and suitable insurance for the protection of employees not otherwise protected.

E. **UMBRELLA LIABILITY INSURANCE** (for construction projects exceeding $10,000,000, provide the following coverage):

The Contractor 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 Contractor 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

F. **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 Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder’s risk “all-risk” or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made 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 Contractor, Subcontractors and Sub-subcontractors in the Project as named insureds.

All associated deductibles shall be the responsibility of the Contractor. 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, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect’s and Contractor’s services and expenses required as a result of such insured loss.

Contractor shall maintain Builders Risk coverage including partial use by Owner.

The Contractor shall waive all rights of subrogation as regards 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 Contractor shall require all Subcontractors 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 Contractor 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.

G. POLLUTION LIABILITY INSURANCE

If Contractor is providing directly or indirectly work with pollution/environmental hazards, the Contractor 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.

H. 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:

1. Any and all deductibles or self-insured retentions contained in any Insurance policy shall be assumed by and at the sole risk of the Contractor;
2. 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 Contractor 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 Contractor 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 Contractor in obtaining and/or maintaining any required insurance shall not relieve the Contractor from any liability under the Contract, nor shall the insurance requirements be construed to conflict with the obligations of the Contractor concerning indemnification;
3. 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;
4. 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 Contractor from its obligation to meet the insurance requirements contained in these General Conditions.

ARTICLE 26. CONTRACTOR'S PERFORMANCE AND PAYMENT BONDS

The Contractor shall furnish a Performance Bond and a Labor and Material Payment Bond on State Forms SC-6.22, Performance Bond, and SC-6.221, Labor and Material Payment Bond, or such other forms as State Buildings Programs 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 Contract sum. The expense of these bonds shall be borne by the Contractor and the bonds shall be filed with State Buildings Programs.

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 the bid documents, or loses its right to do business in the State of Colorado, another Surety will be required, which the Contractor shall furnish to State
Buildings Programs within ten (10) days after receipt of Notice from the State or after the Contractor otherwise becomes aware of such conditions.

ARTICLE 27. LABOR AND WAGES
In accordance with laws of Colorado, C.R.S. § 8-17-101, et. seq., as amended, Colorado labor shall be employed to perform the work to the extent of not less than eighty percent (80%) of each type or class of labor in the several classifications of skilled and common labor employed on the Project. If the Federal Davis-Bacon Act shall be applicable to the Project, as indicated in Article 7B (Contractor's Agreement 6.21), Modification of Article 27, the minimum wage rates to be paid on the Project will be specified in the Contract Documents.

ARTICLE 28. ROYALTIES AND PATENTS
The Contractor 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 Contractor 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 harmless from loss on account thereof, in accordance with Article 52C, Indemnification; provided, however, the Contractor shall not be responsible for such loss or defense for any copyright violations contained in the Contract Documents prepared by the Architect/Engineer or the Principal Representative of which the Contractor is unaware, or for any patent violations based on specified processes that the Contractor is unaware are patented or that the Contractor should not have had reason to believe were patented.

ARTICLE 29. ASSIGNMENT
Except as otherwise provided hereafter the Contractor 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 Contractor 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 Contractor 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 Contractor 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 State against the Contractor or the assignee.

ARTICLE 30. CORRECTION OF WORK BEFORE ACCEPTANCE
The Contractor 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. If such materials shall have been incorporated in the Work, or if any unsatisfactory work is discovered, the Contractor 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 contractors destroyed or damaged by the removal or replacement of such defective material or work.

If the Contractor 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 Contractor and the Surety, remove them and may store the material at the Contractor's expense. The Principal Representative may accomplish the removal and replacement with its own forces or with another Contractor. If the Contractor 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 Contractor. If the Contractor shall commence and diligently pursue such removal and replacement before the expiration of the seven day period, or if the Contractor 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.

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 from the next application submitted by the Contractor.

If the Contractor 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 as instructed by the Architect/Engineer from the Contractor’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 Contract sum by unilateral Change Order, in accordance with Article 33, Payments Withheld and Article 35, Changes In The Work.

If the Contractor disagrees with the Notice to remove work or materials condemned or declared irreparably defective, the Contractor 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.

During construction, whenever the Architect/Engineer has advised the Contractor in writing, in the Specifications, by reference to Article 6, Architect/Engineer Decisions And Judgments, of these General Conditions or elsewhere in the Contract Documents of a need to observe materials in place prior to their being permanently covered up, it shall be the Contractor’s responsibility to notify the Architect/Engineer at least forty-eight (48) hours in advance of such covering operation. If the Contractor fails to provide such notification, Contractor shall, at his or her expense, uncover such portions of the work as required by the Architect/Engineer for observation, and reinstall such covering after observation. When a covering operation is continued from day to day, notification of the commencement of a single continuing covering operation shall suffice for the activity specified so long as it proceeds regularly and without interruption from day to day, in which event the Contractor shall coordinate with the Architect/Engineer regarding the continuing covering operation.

ARTICLE 31. APPLICATIONS FOR PAYMENTS
A. CONTRACTOR’S SUBMITTALS
   On or before the first day of each month and no more than five days prior thereto, the Contractor 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 within thirty (30) days after the last day of the period for which payment is requested. The Contractor shall submit the application for payment to the Architect/Engineer on State forms SBP-7.2, Certificate for Contractor’s Payment, or such other format as the State Buildings Programs shall approve, in an itemized format in accordance with the schedule of values or a cost loaded CPM when required, supported to the extent reasonably required by the Architect/Engineer or 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 Contractor’s right to payments as the Architect/Engineer or 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 Contractor 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 or the Architect/Engineer, and shall be subject to the right to inspect the materials at the request of either the Architect/Engineer or 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.

B. ARCHITECT/ENGINEER CERTIFICATION
In accordance with the Architect/Engineer's agreement with the Principal Representative, the Architect/Engineer after appropriate observation of the progress of the work shall certify to the Principal Representative the amount that the Contractor is entitled to, and forward the application to the Principal Representative. If the Architect/Engineer certifies an amount different from the amount requested or otherwise alters the Contractor’s application for payment, a copy shall be forwarded to the Contractor.

If the Architect/Engineer is unable to certify all or portions of the amount requested due to the absence or lack of required supporting evidence, the Architect/Engineer shall advise the Contractor of the deficiency. If the deficiency is not corrected at the end of ten (10) days, the Architect/Engineer may either certify the remaining amounts properly supported to which the Contractor is entitled, or return the application for payment to the Contractor for revision with a written explanation as to why it could not be certified.

C. 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 Contractor 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 § 24-91-101, et seq., C.R.S., as amended, and except as provided in § 24-91-103, C.R.S., as amended, and Article 31D, 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.

D. RELEASE OF RETAINAGE
The Contractor may, for satisfactory and substantial reasons shown to the Principal Representative’s satisfaction, make a written request to the Principal Representative and the Architect/Engineer 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 Architect/Engineer, the Contractor, and the Principal Representative. Any such request shall be supported by a written approval from the Surety furnishing the Contractor’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 Architect/Engineer or 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 Contractor, any applicable warranties, as-built information, maintenance manuals and other customary close-out documentation. Neither the Principal Representative nor the Architect Engineer shall be obligated to review such documentation nor shall they be deemed to assume any obligations to third parties by any review undertaken.

The Contractor'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 Contractor 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 Contractor’s request for such release satisfactory and supported by substantial reasons, 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.

ARTICLE 32. CERTIFICATES FOR PAYMENTS
State Form SBP-7.2, Certificate For Contractor's Payment, and its continuation detail sheets, when submitted, shall constitute the Certificate of Contractor’s Application for Payment, and shall be a representation by the Contractor 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 Contractor's Application for Payment shall be sworn under oath and notarized.

ARTICLE 33. PAYMENTS WITHHELD
The Architect/Engineer, the Principal Representative or State Buildings Programs 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:

1. Defective work not remedied;
2. Claims filed or reasonable evidence indicating probable filing of claims;
3. Failure of the Contractor to make payments to Subcontractors for material or labor;
4. A reasonable doubt that the Contract can be completed for the balance of the contract price then unpaid;
5. Damage or injury to another contractor or any other person, persons or property except to the extent of coverage by a policy of insurance;
6. 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;
7. Failure to submit a monthly construction schedule;
8. Failure of the Contractor to keep work progressing in accordance with the time schedule;
9. Failure to keep a superintendent on the work;
10. Failure to maintain as built drawings of the work in progress;
11. Unauthorized deviations by the Contractor from the Contract Documents; or
12. On account of liquidated damages.

In addition, the Architect Engineer, Principal Representative or State Buildings Programs may withhold or nullify the whole or any part of any application for any reason noted elsewhere in these General Conditions of the Contractor’s Design/Bid/Build 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 Architect/Engineer or the Principal Representative estimates to be required to allow the State to accomplish the Work, cure the failure and cover any damages or injuries, including an allowance for attorneys 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.

ARTICLE 34. DEDUCTIONS FOR UNCORRECTED WORK

If the Architect/Engineer and the Principal Representative deem it inexpedient to correct work injured 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 Contractor of intent to do so, make reasonable reductions from the amounts otherwise due the Contractor on the next application for payment. Notice shall specify the amount or terms of any contemplated reduction. The Contractor may during this period elect to correct or perform the work. If the Contractor does not elect to correct or perform the work, an equitable deduction from the Contract sum 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 notice period shall be extended and tolled until facilitation has occurred.

ARTICLE 35. CHANGES IN THE WORK

The Principal Representative, or such other Procurement Officer as the Principal Representative may designate, without invalidating the Agreement, and with the approval of State Buildings Programs and the State Controller, may order extra work or make changes with or without the consent of the Contractor as hereafter provided, by altering, adding to or deducting from the Work, the Contract sum 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 Contractor 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 Architect/Engineer 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 Programs, 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 Programs as hereafter provided in Article 35C, Emergency Field Ordered Changed Work; or 3) by an allocation in writing of any allowance already provided in the encumbered contract amount, the Contract sum being later adjusted to decrease the Contract sum by any unallocated or unexpended amounts remaining in such allowance. No change to the Contract sum shall be valid unless so ordered.

A. THE VALUE OF CHANGED WORK

1. 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.

2. Where the Contractor and the Principal Representative cannot agree on the value of extra work, the Principal Representative may order the Contractor 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. 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 Contractor pursuant to the claims process in Article 36, Claims. The Principal Representative is the Procurement Officer for purposes of all of the remedies provisions of the Contract.

3. Except as otherwise provided in Article 35B, Detailed Breakdown, below, the Cost Principles of the Colorado Procurement Rules in effect on the date of this Contract, pursuant to § 24-107-101, C.R.S., as amended, shall govern all Contract changes.

B. DETAILED BREAKDOWN

In all cases where the value of the extra or changed work is not known based on unit prices in the Contractor’s bid or the Agreement, a detailed change proposal shall be submitted by the Contractor on a Change Order Proposal (SC-6.312), or in such other format as the State Buildings Program approves, 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 Architect/Engineer or the Principal Representative:

1. 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).

2. 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.

3. 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; provided however that additional cost of on-site superintendence shall be allowable whenever in the opinion of the Architect/Engineer the impact of multiple change requests to be concurrently performed will result in inadequate levels of supervision to assure a proper result unless additional superintendence is provided.

4. 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.

5. Workers’ compensation costs, if not included in labor burden.

6. The cost of commercial general liability and property damage insurance premiums but only to the extent charged the Contractor as a result of the changed work.

7. Overhead and profit, as hereafter specified.

8. Builder’s risk insurance premium costs.

9. Bond premium costs.

10. Testing costs not otherwise excluded by these General Conditions.

11. Subcontract costs.
Unless modified in the Supplementary General Conditions, overhead and profit shall not exceed the percentages set forth in the table below.

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<thead>
<tr>
<th></th>
<th>OVERHEAD</th>
<th>PROFIT</th>
<th>COMMISSION</th>
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<tbody>
<tr>
<td>To the Contractor or to Subcontractors for the portion of work performed with their own forces:</td>
<td>10%</td>
<td>5%</td>
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<tr>
<td>To the Contractor or to Subcontractors for work performed by others at a tier immediately below either of them:</td>
<td>5%</td>
<td>5%</td>
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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 in the amount of the Contract sum, the overhead and profit will be allowed on the net increase only. On proposals resulting in a net deduct to the amount of the Contract sum, 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 Contractor 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 Programs 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 35A, 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 Contractor’s application for payment.

The Principal Representative reserves the right to contract with any person or firm other than the Contractor for any or all extra work; however, unless specifically required in the Contract Documents, the Contractor shall have no responsibility without additional compensation to supervise or coordinate the work of persons or firms separately contracted by the Principal Representative.

C. HAZARDOUS MATERIALS

1. 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 Contractor 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 Contractor commences the work.

2. In the event the Contractor encounters any materials reasonably believed to be hazardous substances which have not been rendered harmless, the Contractor 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 Contractor, 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 Contractor.

3. The contractor 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.

D. EMERGENCY FIELD CHANGE ORDERED WORK
The Principal Representative, without invalidating the Agreement, and with the approval of State Buildings Programs 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 Contractor, 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 Contract sum, which NTE amount shall represent the maximum amount of adjustment to which the Contractor 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 Contractor 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 Contractor shall report all costs to the Principal Representative and the Architect/Engineer. 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 form (SC-6.31) in accordance with the procedures described in Article 35A, The Value of Changed Work, and B, Detailed Breakdown, above. Unless otherwise provided in writing signed by the Director of State Buildings Programs to the Principal Representative and the Contractor, 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.

E. **APPROPRIATION LIMITATIONS - § 24-91-103.6, C.R.S., as amended**

The amount of money appropriated, as shown on the Agreement (SC 6.21), 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 Agreement (SC-6.21), unless one of the following occurs: (1) the Contractor 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 contractor 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 Contractor’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.

**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 2D, 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 Contractor shall 1) first, seek a decision by the Architect/Engineer, and 2) shall second, informally present the claim to Principal Representative as described hereafter, and 3) failing resolution in the field, give Notice of intent to exercise statutory rights of review of a formal contract controversy, and 4) seek resolution outside the Contract as provided by the Procurement Code.

If the Contractor claims that any instructions, by detailed drawings, or otherwise, or any other act or omission of the Architect/Engineer or Principal Representative affecting the scope of the Contractor’s work, involve extra cost, extra time or changes in the scope of the Work under this Contract, the Contractor shall have the right to assert a claim for such costs or time, provided that before either proceeding to execute such work (except in an emergency endangering life or property), or filing a Notice of claim, the Contractor shall have obtained or requested a written decision of the Architect/Engineer following the procedures as provided in Article 6A and B, Architect/Engineer Decisions and Judgments, respectively; provided, however, that in the case of a directed change in the Work pursuant to Article 36A4, no written judgment or decision of the Architect/Engineer is required. If the Contractor is delayed by the lack of a response to a request for a decision by the Architect/Engineer, the Contractor shall give Notice in accordance with Article 38, Delays And Extensions Of Time.

Unless it is the Architect/Engineer’s judgment and determination that the work is not included in the performance required by the Contract Documents, the Contractor shall proceed with the work as originally directed. Where the Contractor’s claim involves a dispute concerning the value of work unilaterally directed pursuant to Article 35A3 the Contractor shall also proceed with the work as originally directed while his or her claim is being considered.
The Contractor shall give the Principal Representative and the Architect/Engineer Notice of any claim promptly after the receipt of the Architect/Engineer's decision, but in no case later than three (3) business days after receipt of the Architect/Engineer's decision (or no later than ten (10) days from the date of the Contractor's request for a decision when the Architect/Engineer fails to decide as provided in Article 6). 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 Contractor with good cause shown, but any such extension to be effective shall be in writing.

The Principal Representative shall respond in writing, with a copy to the Architect/Engineer, 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 Contractor and Principal Representative agree) after receipt of the Contractor's Notice of claim regarding such instructions or alleged act or omission. If no response to the Contractor's claim is received within seven (7) business days of Contractor's Notice (or at such other time as the Contractor 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 35A, 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 Contractor's claim that is denied.

If the Contractor disagrees with the Principal Representative's judgment and determination on the claim and seeks an equitable adjustment of the Contract sum 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, § 24-109-106, C.R.S., shall not arise until the initial claim process described above in this Article 36 has been properly exhausted by the Contractor. The Contractor's failure to proceed with work directed by the Architect/Engineer or to exhaust the claim process provided above in this Article 36, shall constitute an abandonment of the claim by the Contractor 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 Contractor 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 Contractor 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 Contractor 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 35A, The Value of Changed Work. In the event of a denial the Principal Representative shall give Notice to the Contractor of his or her right to administrative and judicial reviews as provided in the Colorado Procurement Code, § 24-109-201 et seq, C.R.S., as amended. If no decision regarding the contract controversy is issued within twenty (20) business days of the Contractor's giving Notice (or such other date as the Contractor 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 Contractor's claim.
Either the Contractor 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 Contractor 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 Architect Engineer, or the decision of the Principal Representative to deny any claim or denying the contract controversy, shall not be grounds for the Contractor 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 Contractor shall proceed diligently with the work directed.

In all cases where the Contractor proceeds with the work and seeks equitable adjustment by filing a claim and or statutory appeal, the Contractor shall keep a correct account of the extra cost, in accordance with Article 35B, 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 Contractor in respect of such extra costs shall be limited to reimbursement for the current additional expenditure by the Contractor made necessary by the change in the work, plus a reasonable amount for overhead and profit, determined in accordance with Article 35B, Detailed Breakdown, determined solely with reference to the additional work, if any, required by the change.

**ARTICLE 37. DIFFERING SITE CONDITIONS**

A. **NOTICE IN WRITING**

The Contractor shall promptly, and where possible before conditions are disturbed, give the Architect/Engineer and the Principal Representative Notice in writing of:

1. 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,

2. 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 Architect/Engineer 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 Contractor’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 Contract sum 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.

B. **LIMITATIONS**

No claim of the Contractor under this clause shall be allowed unless the Contractor has given the Notice required in Article 37A, 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 State to the extent required by the nature of the differing conditions; provided, however, that even when so extended no claim by the Contractor for an equitable adjustment hereunder shall be allowed if not quantified and presented prior to the date the Contractor requests a final inspection pursuant to Article 41A, Notice Of Completion.
ARTICLE 38. DELAYS AND EXTENSIONS OF TIME
If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the State of Colorado or the Architect/Engineer, or of any employee or agent of either, or by any separately employed Contractor or by strikes, lockouts, fire, unusual delay in transportation, unavoidable casualties or any other causes beyond the Contractor’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 Contractor shall be able to show he or she could not have avoided by the exercise of due diligence.

The Contractor shall provide Notice in writing to the Architect/Engineer, the Principal Representative and State Buildings Programs 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.

Provided that the Contractor has submitted reasonable schedules for approval when required by Article 12, Requests for Information and Schedules, if no schedule is agreed to fixing the dates on which the responses to requests for information or detail drawings will be needed, or Shop Drawings, Product Data or Samples are to be reviewed as required or allowed by Article 12B, Schedules, no extension of time will be allowed for the Architect/Engineer’s failure to furnish such detail drawings as needed, or for the failure to initially review Shop Drawings, Product Data or Samples, except in respect of that part of any delay in furnishing detail drawings or instructions extending beyond a reasonable period after written demand for such detailed drawings or instructions is received by the Architect/Engineer. In any event, any claim for an extension of time for such cause will be recognized only to the extent of delay directly caused by failure to furnish detail drawings or instructions or to review Shop Drawings, Product Data or Samples pursuant to schedule, after such demand.

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 Architect/Engineer, the Principal Representative and State Buildings Programs 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 Contractor 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 Contractor’s CPM schedule. Where the circumstances make it indisputable in the opinion of the Architect/Engineer that the delay affected the completion of the Work so directly that the additional notice of the schedule impact by reference to a CPM schedule was unnecessary, a reasonable extension of time may be granted.

Extension of the time for completion of the Work will be granted for delays due to weather conditions only when the Contractor 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 Contractor 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 Contractor 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.
ARTICLE 39. NON-BINDING DISPUTE RESOLUTION – FACILITATED NEGOTIATIONS

The Contractor 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 or any decision of the Architect/Engineer. 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 Programs to appoint such a person, who, if appointed, shall be accepted for this purpose by both the Contractor 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:

1. 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;
2. 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);
3. 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;
4. a party shall review any meeting agenda proposed by a facilitator and endeavor to be informed on the subjects to be discussed;
5. 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;
6. 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;
7. 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;
8. 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;
9. 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 direct the Architect/Engineer to appropriately document any resolution or agreement reached and to execute any Amendment or Change Order to the Contract necessary to implement their agreement; and,
10. 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 52F, Choice of Law; No Arbitration, 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 2D, 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 7 (Contractor’s Agreement SC-6.21), Optional Provisions And Elections. When so modified, the references to the parties’ right to elect facilitated negotiation elsewhere in these General Conditions shall be deleted.

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 Contractor 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, State Buildings Programs and the Contractor. 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 Contractor 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 Contractor complies with Article 41, Completion, Final Inspection, Acceptance and Settlement.

ARTICLE 41. COMPLETION, FINAL INSPECTION, ACCEPTANCE AND SETTLEMENT

A. 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 Contractor shall file a written Notice with the Architect/Engineer that the Work, or such discrete physical portion, in the opinion of the Contractor, is substantially complete under the terms of the Contract. The Contractor 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 Architect/Engineer or 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 Contractor and the Notice shall then be resubmitted.

B. FINAL INSPECTION
Within ten (10) days after the Contractor files written Notice that the Work is substantially complete, the Architect/Engineer, the Principal Representative, and the Contractor 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 Programs shall be notified of the inspection not less than three (3) business days in advance of the inspection. The Contractor shall provide the Principal Representative and the Architect/Engineer an updated punch list in sufficient detail to fully outline the following:

1. work to be completed, if any; and
2. work not in compliance with the Drawings or Specifications, if any.

A final punch list shall be made by the Architect/Engineer in sufficient detail to fully outline to the Contractor:

1. work to be completed, if any;
2. work not in compliance with the Drawings or Specifications, if any; and
3. 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 Contractor, the Principal Representative, and State Buildings Programs. The Architect/Engineer's final punch list shall control over the Contractor's preliminary punch list.

C. NOTICE OF SUBSTANTIAL COMPLETION

Notice of Substantial Completion shall establish the date of substantial completion of the Project. The Contractor 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 ensure 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:

1. 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;
2. All required corrections noted on the Building Inspection Record shall have been completed unless the Architect/Engineer, the Principal Representative and State Buildings Programs, 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;
3. The building, structure or Project can be fully and comfortably used by the Principal Representative and the public without undue interference by the Contractor'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;
4. 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
5. The Contractor 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 Contractor despite due diligence. The schedule shall provide for a reasonable punch list inspection process. Unless liquidated damages have been specified in Article 7D(2) (Contractor’s Agreement SC-6.21), the cost to the Principal Representative, if any, for re-inspections due to failure to adhere to the Contractor’s proposed punch-list completion schedule shall be the responsibility of the Contractor and may be deducted by the Principal Representative from final amounts due to the Contractor.
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 Contractor 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 Programs 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 Programs, 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.

D. NOTICE OF ACCEPTANCE
The Notice of Acceptance shall establish the completion date of the Project. It shall not be authorized until the Contractor 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.

E. 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 Contractors 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 Contractor, the Principal Representative in his or her discretion may release all amounts due to the Contractor 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 Architect/Engineer and approved by State Buildings Programs. Before the Principal Representative may issue the Notice of Contractor’s Settlement and advertise the Project for final payment, the Contractor 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:

1. Delivered to the Architect/Engineer:
   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 as-built Contract Documents showing all job changes.
2. Demonstrated to the operating personnel of the Principal Representative the proper operation and maintenance of all equipment.

Upon completion of the foregoing the Project shall be advertised in accordance with the Notice of Contractor’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 Contractor from Subcontractors, suppliers or materialmen 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 Contractor has submitted a written Notice to the Architect/Engineer 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 Contractor, the Principal Representative and the State Controller shall withhold from the Contractor 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 Contractor, as set forth in the published Notice of Contractor’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 Contractor 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 Contractor subject to the same conditions regarding unpaid claims.

ARTICLE 42. GENERAL WARRANTY AND CORRECTION OF WORK AFTER ACCEPTANCE
The Contractor warrants that the materials used and the equipment furnished shall be new and of good quality unless specified to the contrary. The Contractor 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 Contractor of responsibility for defects or faulty materials or workmanship. The Contractor 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 Contractor shall remedy defects, and faulty workmanship or materials, and work not in accordance with the Contract Documents which was 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.
ARTICLE 43. LIENS
Colorado statutes do not provide for any right of lien against public buildings. In lieu thereof, § 38-26-107, C.R.S., 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 Contractor 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 Contractor in the amount of such claims.

ARTICLE 44. ONE-YEAR GUARANTEE AND SPECIAL GUARANTEES AND WARRANTIES
A. ONE-YEAR GUARANTEE OF THE WORK
The Contractor 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 Contractor 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 Contractor 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 Contractor shall not be required to remedy deviations from the requirements of the Contract Documents where such deviations were obvious, apparent and accepted by the Architect/Engineer or 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 Architect/Engineer and the Contractor.

The one year guarantee of the Contractor’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 Contractor’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.

B. SPECIAL GUARANTEES AND WARRANTIES
In case of work performed for which product, manufacturers or other special warranties are required by the Specifications, the Contractor shall secure the required warranties and deliver copies thereof to the Principal Representative through the Architect/Engineer upon completion of the work. These product, manufacturers or other special warranties, as such, do not in any way lessen the Contractor’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.

ARTICLE 45. GUARANTEE INSPECTIONS AFTER COMPLETION
The Architect/Engineer, the Principal Representative and the Contractor 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 7A (Contractor’s Agreement SC-6.21), 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 Principal Representative shall schedule and so notify all parties concerned, including State Buildings Programs, 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 made by the Architect/Engineer and forwarded to the Contractor, the Principal Representative, State Buildings Programs, 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 Contractor 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 Architect/Engineer, the Principal Representative and State Buildings Programs.

If the Contractor fails to promptly correct all deficiencies and defects shown by this report, the Principal Representative may do so, after giving the Contractor 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 Contractor all costs and expenses incurred by it in correcting such deficiencies and defects, as well as all damages resulting from such deficiencies and defects.

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 (SC-6.26).

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 Contractor acknowledges that subject to any limitations in the Advertisement for Bids, issued for the Project, the Contractor’s bid 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 Contractor’s bid. The Contractor agrees that work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will ensure 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 7D (Contractor’s Agreement SC-6.21), 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 Contractor 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 7D (Contractor’s Agreement SC-6.21), Modification of Article 46.

The Contractor and the Contractor’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 7D(1) (Contractor’s Agreement SC-6.21), 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, 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 7D(2) (Contractor’s Agreement SC-6.21), Modification of Article 46, liquidated damages, if any, shall be the amount specified in Article 7D (Contractor’s Agreement SC-6.21), Modification of Article 46, for each calendar day in excess of the number of calendar days specified in the Contractor’s bid 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 7D(1) and (2) (Contractor’s Agreement SC-6.21), 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.

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 Contractor’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 24-10-101, et seq., CRS, 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 24-10-101, et seq., CRS, as now or hereafter amended and the risk management statutes, Section 24-30-1501, et seq., CRS, 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 Contractor 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 Contractor; provided however that it shall not be necessary to first obtain or request a written judgment of the Architect/Engineer.

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.

ARTICLE 48. STATE’S RIGHT TO DO THE WORK; TEMPORARY SUSPENSION OF WORK; DELAY DAMAGES

A. STATE’S RIGHT TO DO THE WORK
If after receipt of Notice to do so, the Contractor 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 Contractor 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 Contractor, as provided in Article 30, Correction Of Work Before Acceptance and Article 33, Payments Withheld, provided, however, that the Architect/Engineer shall approve the amount charged to the Contractor by approval of the Change Order.

B. TEMPORARY SUSPENSION OF WORK
The State, acting for itself or by and through the Architect/Engineer, 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:

1. Unsuitable weather;
2. Faulty workmanship;
3. Improper superintendence;
4. Contractor’s failure to carry out orders or to perform any provision of the Contract Documents;
5. Loss of, or restrictions to, appropriations;
6. 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 Contractor 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 Contractor in writing stating the reasons therefore. The Contractor shall again proceed with the work when so notified in writing.

The Contractor 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 Contractor further acknowledges and agrees that in such event that State may, upon Notice to the Contractor, 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 Contract sum 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.

C. DELAY DAMAGES
The Principal Representative and the State of Colorado shall be liable to the Contractor 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, the Architect/Engineer 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 Contractor for the payment of such a claim only if the Contractor 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.

ARTICLE 49. STATE’S RIGHTS TO TERMINATE CONTRACT

A. GENERAL
If the Contractor 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 Contractor 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, having first obtained the concurrence of the Architect/Engineer in writing that sufficient cause exists to justify such action.

B. CONDITIONS AND PROCEDURES
1. The Principal Representative may terminate the services of the Contractor, which termination shall take effect immediately upon service of Notice thereof on the Contractor 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 Contractor 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 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 Contractor, such excess shall be paid to the Contractor. If, however, the cost, expenses and damages as certified by the Architect/Engineer exceed such unpaid balance of the contract price, the Contractor and his or her Surety shall pay the difference to the Principal Representative.
2. The Principal Representative may require the Surety on the Contractor's bond to take control of the Work and see to it that all the deficiencies of the Contractor 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 Contractor 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 Contractor 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.

3. The Principal Representative may take control of all or a portion of the Work and make good the deficiencies of the Contractor, or the Surety if the Surety has been substituted for the Contractor, with or without terminating the Contract, employing such additional help as the Principal Representative deems advisable in accordance with the provisions of Article 48A, 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 Contractor and his or her Surety, or to deduct from any payment then or thereafter due the Contractor, the costs incurred in having such deficiencies made good and any damages or expenses incurred through the default of Contractor, provided the Architect/Engineer approves the amount thus charged to the Contractor.

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.

C. 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 Contractor shall be limited in recovery to the compensation provided for in Article 50, Termination For Convenience Of State. Termination by the Contractor shall not be subject to such conversion.

ARTICLE 50. TERMINATION FOR CONVENIENCE OF STATE

A. NOTICE OF TERMINATION

The performance of Work under this Contract may be terminated, in whole or from time to time in part, by the State whenever for any reason the Principal Representative shall determine that such termination is in the best interest of State. Termination of work hereunder shall be effected by delivery to the Contractor 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.

B. PROCEDURES

After receipt of the Notice of termination, the Contractor 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 Contractor 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 Contractor agrees to:

1. 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,

2. assign to the State, in the manner, at the time, and to the extent directed by the Principal Representative, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the State 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 Contractor 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 Contractor within such three month period or authorized extension thereof. Upon failure of the Contractor 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 Contractor by reason of the termination and shall thereupon pay to the Contractor 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 § 24-107-101, C.R.S., as amended and associated Cost Principles of the Colorado Procurement Rules as in effect on the date of this Contract.

Subject to the preceding provisions, the Contractor and the Principal Representative may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the termination under this clause, which amount or amounts may include any reasonable cancellation charges thereby incurred by the Contractor 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 Contractor is unable to cancel, the Contractor 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 Contractor shall be paid the agreed amount.

The State may from time to time, under such terms and conditions as it may prescribe, make partial payments against costs incurred by the Contractor 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 Contractor will be entitled hereunder.

The Contractor agrees to transfer title and deliver to the State, 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 State, 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 Contractor 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 State to the Contractor 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 Contractor 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 Contractor 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, §§ 24-109-101, et seq., C.R.S., as amended.

ARTICLE 51. CONTRACTOR’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 Contractor or of any one employed by him, then the Contractor may on seven (7) days’ written Notice to the Principal Representative and the Architect/Engineer 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. If the Architect/Engineer shall fail to
issue or otherwise act in writing upon any certificate for payment within ten (10) days after it is presented and received by the Architect/Engineer, as provided in Article 31, Applications For Payments, or if the Principal Representative shall fail to pay the Contractor any sum certified that is not disputed in whole or in part by the Principal Representative in writing to the Contractor and the Architect/Engineer within thirty (30) days after the Architect/Engineer’s certification, then the Contractor may on ten (10) days’ written Notice to the Principal Representative and the Architect/Engineer stop work and/or give written Notice of intention to terminate this Contract.

If the Principal Representative shall thereafter fail to pay the Contractor any amount certified by the Architect/Engineer and not disputed in writing by the Principal Representative within ten (10) days after receipt of such Notice, then the Contractor 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. 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.

ARTICLE 52. SPECIAL PROVISIONS

A. CONTROLLER’S APPROVAL CRS 24-30-202(1)
This Contract shall not be deemed valid until it has been approved by the Colorado State Controller or designee.

B. FUND AVAILABILITY CRS 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.

C. GOVERNMENTAL IMMUNITY
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, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

D. INDEPENDENT CONTRACTOR 4 CCR 801-2
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 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. Unemployment insurance benefits will be available to Contractor and its employees and agents only if such coverage is made available by Contractor or a third party. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this contract. 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 shall (a) provide and keep in force workers’ compensation and unemployment compensation insurance in the amounts required by law, (b) provide proof thereof when requested by the State, and (c) be solely responsible for its acts and those of its employees and agents.

E. COMPLIANCE WITH LAW
Contractor shall strictly 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.

F. CHOICE OF LAW
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. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole
or in part shall not be valid or enforceable or available in any action at law, whether by way of
complaint, defense, or otherwise. Any provision rendered null and void by the operation of this
provision shall not invalidate the remainder of this contract, to the extent capable of execution.

G. BINDING ARBITRATION PROHIBITED
The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any
provision to the contrary in this contract or incorporated herein by reference shall be null and void.

H. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00
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.

I. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST CRS 24-18-201 & CRS 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’s services and Contractor shall not employ any person having such known
interests.

J. VENDOR OFFSET CRS 24-30-202(1) & CRS 24-30-202.4
Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State’s
vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or
child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in
CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of
Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e)
other unpaid debts owing to the State as a result of final agency determination or judicial action.

K. PUBLIC CONTRACTS FOR SERVICES. CRS §8-17.5-101. [Not Applicable to agreements relating
to the offer, issuance, or sale of securities, investment advisory services or fund management
services, sponsored projects, intergovernmental agreements, or information technology
services or products and services] Contractor certifies, warrants, and agrees that it does not
knowingly employ or contract with an illegal alien who will perform work under this contract and will
confirm the employment eligibility of all employees who are newly hired for employment in the United
States to perform work under this contract, through participation in the E-Verify Program or the
Department program established pursuant to CRS §8-17.5-102(5)(c), 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 Contractor that the subcontractor shall not knowingly employ or
contract with an illegal alien to perform work under this contract. Contractor (a) shall not use E-Verify
Program or Department program procedures to undertake pre-employment screening of job applicants
while this contract is being performed, (b) shall notify the subcontractor and the contracting State
agency within three days if Contractor has actual knowledge that a subcontractor is employing or
contracting with an illegal alien for work under this contract, (c) shall terminate the subcontract if a
subcontractor does not stop employing or contracting with the illegal alien within three days of
receiving the notice, and (d) shall comply with reasonable requests made in the course of an
investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and
Employment. If Contractor participates in the Department program, Contractor shall deliver to the
contracting State agency, Institution of Higher Education or political subdivision a written, notarized
affirmation, affirming that Contractor has examined the legal work status of such employee, and shall
comply with all of the other requirements of the Department program. If Contractor fails to comply with
any requirement of this provision or CRS §8-17.5-101 et seq., the contracting State agency, institution
of higher education or political subdivision may terminate this contract for breach and, if so terminated, Contractor shall be liable for damages.

L. **PUBLIC CONTRACTS WITH NATURAL PERSONS. CRS §24-76.5-101.**
Contractor, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she (a) is a citizen or otherwise lawfully present in the United States pursuant to federal law, (b) shall comply with the provisions of CRS §24-76.5-101 et seq., and (c) has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this contract.

**ARTICLE 53. MISCELLANEOUS PROVISIONS**

A. **CONSTRUCTION OF LANGUAGE**
The language used in these General Conditions shall be construed as a whole according to its plain meaning, and not strictly for or against any party. Such construction shall, however, construe language to interpret the intent of the parties giving due consideration to the order of precedence noted in Article 2C, Intent of Documents.

B. **SEVERABILITY**
Provided this Agreement can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof, provided that the Parties can continue to perform their obligations under this Agreement in accordance with its intent.

C. **SECTION HEADINGS**
The captions and headings in this Agreement are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

D. **AUTHORITY**
Each person executing the Agreement and its Exhibits in a representative capacity expressly represents and warrants that he or she has been duly authorized by one of the parties to execute the Agreement and has authority to bind said party to the terms and conditions hereof.

E. **INTEGRATION OF UNDERSTANDING**
This Contract is intended as the complete integration of all understandings between the parties and supersedes all prior negotiations, representations, or agreements, whether written or oral. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein in writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a written Change Order or Amendment to this Contract.

F. **VENUE**
All suits or actions related to this Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. **NO THIRD PARTY BENEFICIARIES**
Enforcement of this Agreement 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 the Contract, and do not create any rights for such third parties.

H. **WAIVER**
Waiver of any breach under a term, provision, or requirement of this Agreement, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.
I. INDEMNIFICATION
Contractor shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees, to the extent such claims are caused by any negligent act or omission of the Contractor, its employees, agents, subcontractors or assignees pursuant to the terms of this Contract, but not to the extent such claims are caused by any negligent act or omission of, or breach of contract by, the State, its employees, agents, other contractors or assignees, or other parties not under control of or responsible to the Contractor.

J. STATEWIDE CONTRACT MANAGEMENT SYSTEM
If the maximum amount payable to Contractor under this Contract is $100,000 or greater, either on the Effective Date or at anytime thereafter, this section shall apply.

Contractor agrees to be governed, and to abide, by the provisions of CRS 24-102-205, 24-102-206, 24-103-601, 24-103.5-101, 24-105-101, and 24-105-102 concerning the monitoring of vendor performance on state contracts and inclusion of contract performance information in a statewide contract management system.

Contractor’s performance shall be subject to Evaluation and Review in accordance with the terms and conditions of this Contract, State law, including C.R.S 24-103.5-101, and State Fiscal Rules, Policies and Guidance. Evaluation and Review of Contractor’s performance shall be part of the normal contract administration process and Contractor’s performance will be systematically recorded in the statewide Contract Management System. Areas of Evaluation and Review shall include, but shall not be limited to quality, cost and timeliness. Collection of information relevant to the performance of Contractor’s obligations under this Contract shall be determined by the specific requirements of such obligations and shall include factors tailored to match the requirements of Contractor’s obligations. Such performance information shall be entered into the statewide Contract Management System at intervals established herein and a final Evaluation, Review and Rating shall be rendered within 30 days of the end of the Contract term. Contractor shall be notified following each performance Evaluation and Review, and shall address or correct any identified problem in a timely manner and maintain work progress.

Should the final performance Evaluation and Review determine that Contractor demonstrated a gross failure to meet the performance measures established hereunder, the Executive Director of the Colorado Department of Personnel and Administration (Executive Director), upon request by the Principal Representative, and showing of good cause, may debar Contractor and prohibit Contractor from bidding on future contracts. Contractor may contest the final Evaluation, Review and Rating by: (a) filing rebuttal statements, which may result in either removal or correction of the evaluation (CRS 24-105-102(6)), or (b) under CRS 24-105-102(6), exercising the debarment protest and appeal rights provided in CRS 24-109-106, 107, 201 or 202, which may result in the reversal of the debarment and reinstatement of Contractor, by the Executive Director, upon a showing of good cause.

K. CORA DISCLOSURE
To the extent not prohibited by federal law, this Agreement and the performance measures and standards under CRS §24-103.5-101, if any, are subject to public release through the Colorado Open Records Act, CRS §24-72-101, et seq.
1. GENERAL CONDITIONS, ARTICLE 23. F. SIGN – DELETE the entire section.

2. GENERAL CONDITIONS, ARTICLE 25 INSURANCE - DELETE the entire section and replace with the following:

The Contractor shall obtain and maintain, at its own expense and for the duration of the contract including any warranty periods under the Contract are satisfied, the insurance coverages set forth below.

By requiring such insurance, the Principal Representative shall not be deemed or construed to have assessed the risk that may be applicable to the Contractor its agents, representatives, employees or subcontractors under this contract. The insurance requirements herein for this Contract in no way limit the indemnity covenants contained in the Contract. The Principal Representative in no way warrants that the limits contained herein are sufficient to protect the Contractor from liabilities that might arise out of the performance of the work under this Contract by the Contractor, its agents, representatives, employees, or subcontractors. The Contractor shall assess its own risks and if it deems appropriate and/or prudent, maintain higher limits and/or broader coverages. The Contractor is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types.

COVERAGES AND LIMITS OF INSURANCE - - Contractor shall provide coverage with limits of liability not less than those stated below.

1. Commercial General Liability – ISO CG 0001 or equivalent. Coverage to include:
   - Premises and Operations
   - Explosions, Collapse and Underground Hazards
   - Personal / Advertising Injury
   - Products / Completed Operations
   - Liability assumed under an Insured Contract (including defense costs assumed under contract)
   - Independent Contractors
   - Additional Insured—Owners, Lessees or Contractors Endorsement, ISO Form 2010 (2004 Edition or equivalent)
   - Additional Insured—Owners, Lessees or Contractors Endorsement (Completed Operations), ISO CG 2037 (7/2004 Edition or equivalent)
   - The policy shall be endorsed to include the following additional insured language on the Additional Insured Endorsements specified above: “The Regents of the University of Colorado, a Body Corporate, named as an additional insured with respect to liability and defense of suits arising out of the activities performed by, or on behalf of the Contractor, including completed operations”.
   - Commercial General Liability Completed Operations policies must be kept in effect for up to three (3) years after completion of the project. For buildings with a
construction cost greater than $99 million, the Commercial General Liability Completed Operations policies must be kept in effect for up to eight (8) years after the completion of the project.

- **An umbrella and/or excess liability policy may be used to meet the minimum liability requirements provided that the coverage is written on a “following form” basis.**

<table>
<thead>
<tr>
<th>Liability Limits</th>
<th>General Aggregate</th>
<th>Products/Completed Operation Aggregate</th>
<th>Each Occurrence</th>
<th>Personal/Advertising Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary General Liability</td>
<td>$2,000,000</td>
<td>$2,000,000</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
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<tr>
<td>Umbrella or Excess Liability*</td>
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<td>$5,000,000</td>
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</table>

*Umbrella or Excess Liability does not apply to projects totaling $500,000 or under.

2. **Automobile Liability**

Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of this contract

**Minimum Limits:**

- Bodily Injury/Property Damage (Each Accident) $1,000,000

3. **Workers Compensation**

- Statutory Benefits (Coverage A)
- Employers Liability (Coverage B)

  a. This requirement shall not apply when a contractor or subcontractor is exempt under Colorado Workers’ Compensation Act., **AND** when such contractor or subcontractor executes the appropriate sole proprietor waiver form.

**Minimum Limits:**

- Coverage A (Workers’ Compensation) Statutory
- Coverage B (Employers Liability)
  - Each accident $100,000
  - Disease each employee $100,000
  - Disease policy limit $500,000

4. **Contractors Pollution Liability**

- Coverage shall apply to sudden and gradual pollution conditions resulting from the escape of release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, natural gas, waste materials, or other irritants, contaminants, or pollutants (including asbestos). Policy shall cover the Contractor’s completed operations.
- If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended
discovery period will be exercised for a period of three (3) years beginning from the
time that work under this contract is completed.
• **The policy shall be endorsed to include the following as Additional Insureds:**
The Regents of the University of Colorado, a Body Corporate, named as an
additional insured with respect to liability and defense of suits arising out of the
activities performed by, or on behalf of the Construction Manager, including
completed operations”.
• Endorsements CA9948 and MCS-90 are required on the Automobile Liability
Coverage if the Contractor is transporting any type of hazardous materials.
• **Contractors Pollution Liability policies must be kept in effect for up to three (3)
years after completion of the project.**

### Minimum Limits:

- **Per Loss** $2,000,000
- **Aggregate** $2,000,000

5. **Builder’s Risk/ Installation Floater**

Unless otherwise provided or instructed by the Principal Representative, the Contractor shall
purchase and maintain, in a company or companies lawfully authorized to do business in the
jurisdiction in which the project is located, Builder’s Risk Insurance in the amount of the initial
contract amount as well as subsequent modifications for the entire project at the site on a
replacement cost basis without optional deductibles. This coverage is required for new
buildings or additions to existing buildings and for materials and equipment to be installed in
existing structures.

- Covered Cause of Loss: Special Form
- Include Theft and Vandalism
- Labor costs to repair damaged work
- Shall be written for 100% of the completed value (replacement cost basis)
- Deductible maximum is $50,000.00
- Waiver of Subrogation is to apply
- The Regents of the University of Colorado, a body corporate, shall be added as
  Additional Named Insured on Builders Risk.

1. Policy must provide coverage from the time any covered property becomes the
responsibility of the Contractor, and continue without interruption during construction,
renovation, or installation, including any time during which the covered property is being
transported to the construction installation site, or awaiting installation, whether on or off
site.
2. The Policy 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
Principal Representative has insurable interest in the property to be covered, whichever is
later.
3. The Builder’s Risk insurance shall include interests of the Principal Representative, and if
applicable, affiliated or associated entities, the General Contractor, subcontractors and sub-
tier contractors in the project.
4. Builders’ Risk Coverage shall be on a **Special Covered Cause of Loss Form** and shall
include theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and
debris removal including demolition, increased cost of construction, architect’s fees and expenses, flood (including water damage), earthquake, and if applicable, all below and above ground structures, piping, foundations including underground water and sewer mains, piling including the ground on which the structure rests and excavation, backfilling, filling, and grading. Equipment Breakdown Coverage (a.k.a. Boiler & Machinery) shall be included as required by the Contract Documents or by law, which shall specifically cover insured equipment during installation and testing (including hot testing, where applicable). Other coverages may be required if provided in contract documents.

5. The Builders’ Risk shall be written for 100% of the completed value (replacement cost basis) of the work being performed. The Builders’ Risk shall include the following provisions:
   a. Replacement Cost Basis - including modification of the valuation clause to cover all costs needed to repair the structure or work (including overhead and profits) and will pay based on the values figured at the time of rebuilding or repairing, not at the time of loss
   b. Modify or delete exclusion pertaining to damage to interior of building caused by an
      perils insured against are covered; also provide coverage for water damage

   Note, if the addition, or renovation is to an existing building, The Principal Representative requires that the Contractor provide as an option to include the existing building into the Builders’ Risk Policy. The Principal Representative shall provide the replacement cost value of the existing building

6. At the option of the Principal Representative, the Principal Representative may include Soft Costs (including Loss of Use)/Delay in Opening Endorsement under the builder’s risk policy. The Principal Representative agrees to provide the necessary exposure base information for quotation by the Builder’s Risk carrier. The Principal Representative agrees to pay the premium associated with the Soft Costs coverage, the Principal Representative decides to purchase this coverage.

7. The Builders’ Risk Policy shall specifically permit occupancy of the building during construction. Partial occupancy or use of the work shall not commence until the insurance company or companies providing insurance have consented to such partial occupancy or use. The Principal Representative and Contractor shall take reasonable steps to obtain consent of the insurance company or companies and delete any provisions with regard to restrictions within any Occupancy Clauses within the Builders’ Risk Policy. The Builders’ Risk Policy shall remain in force until acceptance of the project by the Principal Representative.

8. The deductible shall not exceed $50,000 and shall be the responsibility of the Contractor except for losses such as flood (not water damage), earthquake, windstorm, tsunami, volcano, etc. Losses in excess of $50,000 insured shall be adjusted in conjunction with the Principal Representative. Any insurance payments/proceeds shall be made payable to the Principal Representative subject to requirements of any applicable mortgagee clause. The Contractor shall pay subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require subcontractors to make payments to their sub-subcontractors in similar manner.

   The Principal Representative shall have the authority to adjust and settle any losses in excess of $50,000 with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Principal Representative exercise of this power. It is expressly agreed that nothing in this section shall be subject to arbitration and any references to arbitration are expressly deleted.
9. The Policy shall be amended to show 45 days notice of cancellation. Such notice shall be given to the Principal Representative and Contractor. If requested, the Contractor shall file with the Principal Representative a copy of the policy that includes the insurance coverages required in this section. The policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to the Project.

If the Contractor does not intend to purchase such Builder’s Risk Insurance required by the Contract and with all of the coverages in the amount described above, the Contractor shall so inform the Principal Representative as stated in writing prior to commencement of the work. The Principal Representative may then affect insurance that will protect the interests of the Principal Representative, the General Contractor, Subcontractors and sub-tier contractors in the project. Coverages applying shall be the same as stated above including other coverages that may be required by the Principal Representative. The cost shall be charged to the Contractor. Coverage shall be written for 100% of the completed value of the work being performed, with a deductible not to exceed $50,000 per occurrence for most projects.

All deductibles will be assumed by the Contractor. Waiver of Subrogation is to apply against all parties named as insureds, but only to the extent the loss is covered, and Beneficial Occupancy Endorsements are to apply. If the Principal Representative is damaged by the failure or neglect of the Contractor to purchase or maintain insurance as described above, without so notifying the Principal Representative, then the Contractor shall bear all reasonable costs properly attributable thereto.

ADDITIONAL INSURANCE REQUIREMENTS

1. All insurers must be licensed or approved to do business within the State of Colorado, and unless otherwise specified, all policies must be written on a per occurrence basis.
2. Contractor’s insurance carrier should possess a minimum A.M. Best’s Insurance Guide rating of A- VI.
3. On insurance policies where the Principal Representative are named as additional insureds, the Principal Representative shall be additional insureds to the full limits of liability purchased by the Contractor even if those limits of liability are in excess of those required by this Contract.
4. Contractor shall furnish the Principal Representative with certificates of insurance (ACORD form or equivalent approved by the Principal Representative) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and any required endorsements are to be received and approved by the Principal Representative before work commences. Each insurance policy required by this Contract must be in effect at or prior to commencement of work under this Contract and remain in effect for the duration of the project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of contract.
5. Upon request by the Principal Representative, Contractor must provide a copy of the actual insurance policy effecting coverage(s) required by the contract.
6. The Contractor’s insurance coverage shall be primary insurance and non-contributory with respect to all other available resources.
7. The Contractor shall advise the Principal Representative in the event any general aggregate or other aggregate limits are reduced below the required per occurrence limit. At their own expense, the Contractor will reinstate the aggregate limits to comply with the minimum
requirements and shall furnish to the Principal Representative a new certificate of insurance showing such coverage is in force.

8. Provide a minimum of thirty (30) days advance written notice to the Principal Representative for cancellation, non-renewal, or material changes to policies required under the Contract.


Failure of the Contractor to fully comply with these requirements during the term of the Contract may be considered a material breach of contract and may be cause for immediate termination of the Contract at the option of the Principal Representative. The Principal Representative reserves the right to negotiate additional specific insurance requirements at the time of the contract award.

Subcontractors
Contractor’s certificate(s) shall include all subcontractors as additional insureds under its policies or subcontractors shall maintain separate insurance as determined by the Contractor, however, subcontractor's limits of liability shall not be less than $1,000,000 per occurrence / $2,000,000 aggregate.

Non-Waiver
The parties hereto understand and agree that The Principal Representative is relying on, and does not waive or intend to waive by any provision of this Contract, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, et seq., as from time to time amended, or otherwise available to the Principal Representative or its officers, employees, agents, and volunteers.

Mutual Cooperation
The Principal Representative and Contractor shall cooperate with each other in the collection of any insurance proceeds which may be payable in the event of any loss, including the execution and delivery of any proof of loss or other actions required to effect recovery.

3. GENERAL CONDITIONS, ARTICLE 53 J. MISCELLANEOUS PROVISIONS – STATEWIDE CONTRACT MANAGEMENT SYSTEM- DELETE the entire section.
Environmental Compliance Document (ECD)

The purpose of this document is to ensure all contractors and subcontractors working on the University of Colorado’s Boulder Campus are aware of potential hazards which may be encountered during the course of the project. Additionally, this document outlines contractor responsibilities when working on campus in regards to regulatory requirements and campus standards. Contractors working on the Boulder campus must comply with all applicable University, City, State and Federal environmental regulations and standards. It is the responsibility of the project manager to provide this ECD to all contractors working on campus. Additionally, it is the Project Manager’s responsibility to ensure all signed copies of the ECD are in the project folder.

If you have questions regarding this document or health and Safety on campus please contact the Environmental Health & Safety Department (EH&S) at 303-492-6025.

Project Details

<table>
<thead>
<tr>
<th>EHS Number:</th>
<th>Project Number:</th>
<th>PR007793/HSG10818</th>
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<tbody>
<tr>
<td>Building Number:</td>
<td>606 &amp; 608</td>
<td>Location/Room(s):</td>
</tr>
<tr>
<td>Project Manager:</td>
<td>Jon C. Keiser</td>
<td>Project Coordinator:</td>
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<tr>
<td>Project Name:</td>
<td>CAMP – WV – Elevator Modernization – Phase II</td>
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<td>Scope of work:</td>
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Use of Asbestos Free Materials

The Contractor acknowledges that not all asbestos building materials have or were ever completely banned (EPA/TSCA-1999). The Contractor hereby certifies that to the best of his/her knowledge, information and belief, the materials incorporated into the project, and as used during the construction process, are free of any type of asbestos containing materials (ACM). This Certification includes all materials to be installed and used by any and all Contractors, all Sub-Contractors, and all other Contractors performing work in the University of Colorado Boulder Facilities.

Limitations

This report is based upon site conditions at time of inspection and is valid for 180 days. Any change to the scope of work and/or expiration of this site assessment will require re-inspection. No new materials containing asbestos may be used for any part of the construction for this project. If the scope of work changes or materials previously not identified are discovered, all work must stop and EHS must be notified immediately.

I have read and understand the information contained in this document and agree to abide by its requirements.

Contractor Signature _________________________  Date:____________________
Contractor Representative _______________________________

ECD Contents:
Section 1: Asbestos and Lead Sample Results and Required Actions
Section 2: Contractor Pre-Construction Water Quality Certification
Section 3: Environmental Responsibilities
Section 4: Environmental Health and Safety Reminders
SECTION 1: Asbestos and Lead Hazard Communication

ASBESTOS SAMPLE DATA

House at 1712 Marine St. (TB 32)

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Material Description</th>
<th>Location¹</th>
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Non - Asbestos Containing Materials

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<th>Sample Number</th>
<th>Material Description</th>
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¹ Indicates surface location of the material (N=North wall; E=East wall; S=South wall; W=West wall; F=Floor; C=Ceiling). For example: FNEW indicates that the material can be found on the Floor, North wall, East wall and West wall.

ASBESTOS - CONCLUSIONS AND REQUIRED ACTIONS

TB32 is scheduled to be abated asbestos containing materials (ACMs) and hazardous materials starting in February 2013 and be completed by April 2013, and is also scheduled to be demolished starting in June 2013 and be completed in August 2013.

The site will be backfilled post demolition and seeded/sod installed and left as a undeveloped lot at that time. No further action will be required.

LEAD CONTAINING MATERIALS AND REQUIRED ACTIONS

Room #

<table>
<thead>
<tr>
<th>Material Description</th>
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<tr>
<th>Material Description</th>
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**LEAD- CONCLUSIONS AND REQUIRED ACTIONS**

TB32 is scheduled to be abated asbestos containing materials (ACMs) and hazardous materials starting in February 2013 and be completed by April 2013, and is also scheduled to be demolished starting in June 2013 and be completed in August 2013.

The site will be backfilled post demolition and seeded/sod installed and left as a undeveloped lot at that time. No further action will be required.

**SECTION 2: Contractor Pre-Construction Water Quality Certification**

Per City of Boulder and CDPHE requirements, discharge of any process water or materials from projects or construction sites to sanitary or storm sewers must comply with all applicable laws and regulations.

**NO DISCHARGES OF PROCESS WATER OR OTHER MATERIALS ARE ALLOWED TO STORM SEWERS** (gutters, parking lots, outdoor drains, certain floor drains, tunnel drains, landscaped areas, foundation drains, etc.)—these types of discharges go directly to Boulder Creek without treatment, and severe penalties including monetary fines can be incurred by Contractors who illicitly discharge process water or other materials to storm drains.

Sanitary sewer discharges (sinks, toilets, showers, certain floor drains, etc.) which are treated at the City of Boulder Water Treatment Plant must meet certain requirements. Generally, dilute water-based solutions can be disposed in the sanitary sewer in small volumes (<5 gallons).

Examples of typical project-related wastes that are approved for Sanitary Sewer disposal are:

- Soaps, Detergents, and Non-Ionic Surfactants, diluted in water
- Clean-up and rinses from latex paint, such as brush washing
- Drywall mud rinses, such as cleaning of tools
- Dilute antifreeze solutions

Examples of project-related wastes that cannot be disposed in the Sanitary Sewer are:

- Oils or greases
- Oil-based paints or paint thinner, including residues
- Concentrated or full-strength corrosive chemicals, acidic or caustic
- Flammable solvents
- Toxic chemicals, or solutions that contain metals (lead, mercury, etc.)

**CONTRACTORS:** In the spaces below please indicate any/all potential discharges of process water, chemicals, de-watering, or other materials to sewer systems or landscape areas that are expected to result from project activities:

<table>
<thead>
<tr>
<th>Description of Discharge</th>
<th>Discharge Point</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example: clean-up from drywall mudding operations</strong></td>
<td><strong>sanitary sewer</strong></td>
</tr>
<tr>
<td>Asbestos abatement decontamination shower unit waste water will be filtered down to 5 microns</td>
<td><strong>Sanitary sewer</strong></td>
</tr>
</tbody>
</table>
Contractors are required to locate drains or other water discharge points in the area of the project and provide measures to protect from illicit discharges during contractor activities.

For example, berms or drain covers can be used to protect drains from accidental spills. Chemical products can be protected from spills by use of pans, trays, or other types of secondary containment during storage. A spill kit or spill supplies should be kept on-hand during the project in case of accidental releases. Prevent spills from reaching any drains if it’s safe to do so.

Immediately notify 911 and EH&S 303-492-6025 of accidental hazardous materials releases. For assistance with determining where a drain leads to (storm vs. sanitary, especially floor drains), contact the Facilities Management service center at 303-492-5522.

SECTION 3: Environmental Responsibilities

Contractors working on the UCB campus must comply with all applicable University, City, State and Federal environmental regulations and standards. This includes but is not limited to:

- Developing and implementing Storm Water Management Plans, obtaining associated permits (i.e. dewatering), and using erosion control techniques and Best Management Practices (BMP’s) to protect drains and sewer systems from inappropriate discharges, paying special attention to preventing any contaminants from entering storm sewers or surface water collection systems.
- Properly managing and disposing of hazardous and regulated materials.
- Controlling dust, odors, vapors, debris and run-off during project activities.
- Reporting spills or releases of hazardous materials immediately! Call 911 and during weekdays report to EH&S 303-492-6025.

You are expected do your part to promote awareness and compliance. Violations can result in serious penalties and fines for contractors!

SECTION 4: Environmental Health and Safety Reminders

Spills and Emergencies

Post contingency/preparedness plan; prevent releases to the environment; call 911 immediately to report hazardous spills, & weekdays report to EH&S 303-492-6025

Construction Waste & Debris

Keep saw-cut slurry, drywall mud, grout and mortar, paint, sediment, and all other wastes and process water OUT OF GUTTERS, STREETS, STORM DRAINS, AND PARKING LOTS! Use proper BMP's to protect from run-off and discharges, see website for examples of BMP’s related to project activities: http://www.bouldercolorado.gov/www/pace/government/index.html; sweep and shovel solid materials to contractor supplied construction dumpster; allow solids to settle before pouring off water to the sanitary sewer. Identify drains in advance and designate sanitary sewer drain(s) where it's OK to dump liquids that are pre-approved by EH&S 303-492-6025.

OSHA

Follow applicable regulations for confined space entry (e.g. tunnels), MSDS, product identification & labeling, PPE, trenching and shoring, fall protection, welding vision screens, etc.
Asbestos & Lead-Based Paint

Assume all building materials are asbestos-containing unless written report(s) indicate otherwise. A pre-construction Asbestos and lead site inspection is required prior to beginning any project on campus — Questions? All asbestos and Lead abatement activities on campus must be in compliance with applicable regulations and follow guidelines set forth in CU-EHS Asbestos and Lead Programs. Call EH&S Asbestos Coordinator 303-492-6026.

Dust Control

Use wet methods, exhaust fans, HEPA vacuums, barriers, etc.; watch for fire alarms in buildings that could be activated by dusts; visible emissions are not permitted.

Hazardous Materials & Waste

Includes paints and solvents, oils, fuels, coolants, corrosives, cleaners, pesticides, PCB light ballasts, mercury vapor lamps, smoke detectors, rechargeable and lead acid batteries, and many other materials and products. Do not place in the trash or down the drain. Coordinate disposal with EH&S Haz Mat Unit 303-492-8531.

Odors and Vapors, IAQ

Use protective measures such as barriers, smoke eaters, exhaust fans, ventilation system controls, etc. to capture harmful odors/vapors; watch for building air intakes & coordinate work with building occupants to avoid exposures/complaints.

De-watering

Water must be visibly clear without petroleum “sheen” to be discharged; solids must be settled-out or removed prior to discharge. Dewatering permits may be required from the Colorado Department of Public Health and Environment (CDPHE) - Water Quality Division 303-692-3500.

Utility Locates

Before digging, ALWAYS call the Utility Notification Center of Colorado (UNCC) 1-800-922-1987.
CHANGE ORDER BULLETIN

Change Order Bulletin No: ___________________________ Date __________________________

Contractor: __________________________________________

Institution or Agency: University of Colorado Boulder

Project No./Name: PR007793 / HSG10818 CAMP – WV – Elevator Modernization – Phase II

Description of Work: ______________________________________

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 the Principal Representative 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: ____________________________

PRINCIPAL REPRESENTATIVE

(INSTITUTION or AGENCY)
### Change Order Proposal

**Change Order Proposal No.:**

**Date:**

**Description of Work:** (enter into text box) **Date:**

**Contractor:**

**University of Colorado Boulder**

**Institution or Agency:**

**PR007793/HSG10818 CAMP - WV - Elevator Modernization - Phase II**

**Project No./Name:**

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

**PART I - WORK PERFORMED BY CONTRACTOR**

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Direct Labor Costs</td>
<td>$0.00</td>
</tr>
<tr>
<td>2</td>
<td>Labor Overhead (Direct Labor Burdens)</td>
<td>$(x Line 1) $0.00</td>
</tr>
<tr>
<td>3</td>
<td>Total Contractor's Labor Costs (Lines 1 and 2)</td>
<td>$0.00</td>
</tr>
<tr>
<td>4</td>
<td>Direct Materials Costs</td>
<td>$0.00</td>
</tr>
<tr>
<td>5</td>
<td>Materials Overhead (Delivery Costs &amp; Taxes)</td>
<td>$(x Line 4) $0.00</td>
</tr>
<tr>
<td>6</td>
<td>Total Materials Costs (Lines 4 and 5)</td>
<td>$0.00</td>
</tr>
<tr>
<td>7</td>
<td>Total Equipment Costs</td>
<td>$0.00</td>
</tr>
<tr>
<td>8</td>
<td>PART I - TOTAL CONTRACTOR'S L, M &amp; E COSTS (Lines 3, 6 and 7)</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

**PART II - WORK PERFORMED BY SUBCONTRACTOR**

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>9</td>
<td>Direct Labor Costs</td>
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</tr>
<tr>
<td>10</td>
<td>Labor Overhead (Direct Labor Burdens)</td>
<td>$(x Line 9) $0.00</td>
</tr>
<tr>
<td>11</td>
<td>Total Subcontractor's Labor Costs (Lines 9 and 10)</td>
<td>$0.00</td>
</tr>
<tr>
<td>12</td>
<td>Direct Materials Costs</td>
<td>$0.00</td>
</tr>
<tr>
<td>13</td>
<td>Materials Overhead (Delivery Costs &amp; Taxes)</td>
<td>$(x Line 12) $0.00</td>
</tr>
<tr>
<td>14</td>
<td>Total Subcontractor's Materials Costs (Lines 12 and 13)</td>
<td>$0.00</td>
</tr>
<tr>
<td>15</td>
<td>Total Subcontractor's Equipment Costs</td>
<td>$0.00</td>
</tr>
<tr>
<td>16</td>
<td>Total Subcontractor's L, M &amp; E Costs (Line 11, 14 and 15)</td>
<td>$0.00</td>
</tr>
<tr>
<td>17</td>
<td>Subcontractor's Overhead (Indirect Costs)</td>
<td>$(10% x Line 16) $0.00</td>
</tr>
<tr>
<td>18</td>
<td>Subcontractor's Profit (on line 16)</td>
<td>$0.00</td>
</tr>
<tr>
<td>19</td>
<td>PART II - TOTAL SUBCONTRACTOR'S COSTS (Lines 16, 17 and 18)</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Contractor's Overhead (Indirect Costs)</td>
<td>$(10% x Part I Total) $0.00</td>
</tr>
<tr>
<td>21</td>
<td>Contractor's Profit</td>
<td>$(5% x Part I Total) $0.00</td>
</tr>
<tr>
<td>22</td>
<td>PART III - TOTAL CONTRACTOR OVERHEAD &amp; PROFIT (Lines 20 and 21)</td>
<td>$0.00</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>Contractor's Commission on Subcontractor</td>
<td>$(5% x Part II Total) $0.00</td>
</tr>
<tr>
<td>24</td>
<td>Contractor's Profit (on Line 19)</td>
<td>$0.00</td>
</tr>
<tr>
<td>25</td>
<td>PART IV - TOTAL CONTRACTOR MARKUP ON SUBCONTRACTOR (Lines 23 and 24)</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>SUBTOTAL</td>
<td>$0.00</td>
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</tbody>
</table>

**PART VI - CONTRACTOR'S BOND COST**

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>$0.00</td>
<td></td>
</tr>
</tbody>
</table>

**PART VII - GRAND TOTAL CHANGE ORDER PROPOSAL (Sum of Totals: Parts V and VI)**

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>GRAND TOTAL</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTENDED</td>
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</tr>
<tr>
<td>NO CHANGE</td>
<td></td>
</tr>
<tr>
<td>REDUCED</td>
<td></td>
</tr>
</tbody>
</table>

**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:*

**PRINCIPAL REPRESENTATIVE:**

(Institution or Agency)

**STATE BUILDINGS PROGRAMS:**

(or Authorized Delegate)

Date:

Date:

State Form SC-6.312 (Rev. 5/2011)
### 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 letterhead show costs as follows:

<table>
<thead>
<tr>
<th>Trade</th>
<th>Rate</th>
<th>Duration</th>
<th>Extended Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Line 2. Labor Overhead (Direct Labor Burdens, etc.):
Enter percentage of Line 1 as applicable. (Spreadsheet calculates the value)

#### 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:

<table>
<thead>
<tr>
<th>Materials</th>
<th>Rate</th>
<th>Quantity</th>
<th>Extended Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 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:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Rate</th>
<th>Duration</th>
<th>Extended Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 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 of Line 9 as applicable. (Spreadsheet calculates the value)

#### Line 11. Total Subcontractor'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):
Enter 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.

### 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. Edit percentages applicable to Line 18. 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.

State form SC-6.312 (Rev 5/2011)
Change Order No: ____________________  Contract ID No.  N/A  Date ____________________
Contractor: ________________________
Institution or Agency: University of Colorado Boulder
Project No./Name: PR00793/HSG10818  CAMP – WV – Elevator Modernization – Phase II

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 (Exhibit A) 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).

<table>
<thead>
<tr>
<th>Description of Work/Date</th>
<th>Time of Completion/Calendar Days Extended/Reduced</th>
<th>Dollar Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Contract (Exhibit A) - partial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Order #1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Order #2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Totals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
*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.**

<table>
<thead>
<tr>
<th>Architect/Engineer Firm</th>
<th>Name and Title (print)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contractor (Name of Firm)</th>
<th>Name and Title (print)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University of Colorado Boulder</th>
<th>Institution or Agency</th>
<th>Name and Title (print)</th>
<th>Principal Representative (Signature)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ronald L. Ried, Director, Facilities Management Business Services</td>
<td></td>
</tr>
</tbody>
</table>

**CONTRACT STATUS**

<table>
<thead>
<tr>
<th>Original Contract Value</th>
<th></th>
<th>STATE BUILDINGS PROGRAMS</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Previous increases by CO/Amend</td>
<td>Authorized Delegate:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Previous decreases by CO/Amend</td>
<td>William N. Ward, AIA</td>
<td></td>
</tr>
<tr>
<td>Value After Prior CO’s/Amend</td>
<td></td>
<td>Interim Director, Planning, Design &amp; Construction</td>
<td></td>
</tr>
<tr>
<td>This CO/Amend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increases □</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decreases □</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CURRENT CONTRACT VALUE**

(Verification)
REQUEST FOR INFORMATION
(RFI # 01)

Project No. Project Name: PR007793/HSG10818 CAMP – WV – Elevator Modernization – Phase II

Date: ____________________________
To: ____________________________
From: ____________________________
Sent Via: ____________________________

Drawing Ref.: ____________________________ Spec. Ref.: ____________________________

Subject: ____________________________

Proposed Solution:

________________________________________________________________________

________________________________________________________________________

Schedule Impact: YES

Cost Impact: YES

# I

Estimated CI

Date Response Required

________________________________________ Sent Via: ____________________________

Signature: ____________________________ Company: ____________________________

Response: ____________________________

________________________________________________________________________

Response Date: ____________________________ Sent Via: ____________________________

Person Responding: ____________________________ Signature: ____________________________

Further Action Required:

________________________________________________________________________

Other Documents This RFI Refers to:

<table>
<thead>
<tr>
<th>Letters</th>
<th>RFP</th>
<th>PCO</th>
<th>CO</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS  

NOTICE TO PROCEED (DESIGN/BID/BUILD CONTRACT)  

Date of Notice: (10 days prior to start of construction)  
Date to be inserted by the Principal Representative  
Date/Description of Contract Documents:  
Institution/Agency: University of Colorado Boulder  
Project No./Name: PR007793/HSG10818 CAMP – WV – Elevator Modernization – Phase II  

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 start date of the project: May 14, 2014 (Actual on-site construction)  
The substantial completion date of the project: August 1, 2014  
The final completion date of the project: August 4, 2014  

Actual on-site construction may not commence until all applicable building permits have been obtained by the Contractor.  

By ________________________________________  By ________________________________________  
State Buildings Programs Date Principal Representative Date  
(Authorized Delegate)  (Institution or Agency)  
William N. Ward, AIA Ronald L. Ried, Director  
Interim Director, Planning, Design & Construction Facilities Management Business Services  

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

State Form SBP-6.26  
Rev. 7/2010
STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAMS

NOTICE TO PROCEED (DESIGN/BID/BUILD CONTRACT)

Date of Notice: ____________________________ (10 days prior to start of construction)

Date to be inserted by the Principal Representative

Date/Description of Contract Documents: ____________________________________________________

Institution/Agency: University of Colorado Boulder

Project No./Name: PR007793/HSG10818  CAMP – WV – Elevator Modernization – Phase II

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The final completion date of the project: August 4, 2014

Actual on-site construction may not commence until all applicable building permits have been obtained by the Contractor.

By ________________________________________  By ________________________________________
State Buildings Programs  Principal Representative
(Authorized Delegate)  (Institution or Agency)
William N. Ward, AIA  Ronald L. Ried, Director
Interim Director, Planning, Design & Construction  Facilities Management Business Services

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

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 knowingly 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.

or

B. SOLE PROPRIETOR AFFIDAVIT  

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 of ____________________.

VENDOR:

Vendor Full Legal Name

BY:

Signature of Authorized Representative  Title
STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAMS

CLOSING-OUT CHECKLIST*

Institution or Agency: University of Colorado at Boulder
Architect/Engineer: 
Contractor: 
Project No./Name: PR007793/HSG10818 CAMP – WV – Elevator Modernization – Phase II

After Contractor or Construction Manager is satisfied that work is complete, 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.

<table>
<thead>
<tr>
<th>DATE COMPLETED</th>
<th>SIGNOFF INITIALS</th>
<th>REMARKS</th>
</tr>
</thead>
</table>

1a. Final inspections have been made and permission to occupy Project is obtained through SBP Delegate. The Building Inspection Cards are completely signed off and attached.

1b. If Principal Representative wishes to occupy entire project or portions of Project before completion (Beneficial Occupancy) Project review of condition and responsibility is conducted and noted. (Fill out Form SBP-01 in addition to this form).

2. Notify the local fire department of the date the building will be occupied.

3. Coordination for final utility and service connections, meters, etc., has been made (water, gas, sewer, electricity and telecommunication) and in full operating order.

4. Sterilization of plumbing systems has been performed.

5. Operational tests of systems and equipment have been performed as required.

6. Systems adjustments, such as balancing, equipment operations, etc., have been performed. Reports have been submitted to Architect/Engineer and approved.

7. State personnel are instructed in system and equipment operations as required by contract.

8. Instructions, manuals, guides, charts, etc., are transmitted to Principal Representative.

9. Principal Representative furnish equipment and furnishing are coordinated and placed.

10. Review drawing, specifications, addenda, change orders, etc. for work to be done and note.
11. On the Contract Close-out Punch List (Form SBP-06) the final punch list items deficient or still required are made by the Architect and includes lists furnished by the consultants and promptly distributed to all parties.

12. Schedule for corrections, deficiencies, and items to be supplied is established by Contractor, Assistant Contractor and trades as to location of specific defects if necessary.

13. Final Change Orders are processed (must be completed prior to contract acceptance).

14. The Principal Representative shall not authorize final payment until all items on the punch lists have been completed, the Notice of Acceptance issued and the Notice of Contractor’s Settlement Date is published.

15. Permanent keying, keys and keying instructions have been performed.

16. Extra materials, spares, etc., are delivered to Principal Representative.

17. Record drawings (as-built) requirements have been submitted to A/E.

18. Guarantee/Warranty requirements are met.

19. All records, reports, files, documents, etc., of construction inspector are in order and turned over to Owner as arranged, and to SBP as applicable.

20. Removal of Contractor’s temporary work; cleanup and debris removal is understood and performed.

21. Post-contract maintenance conditions, such as equipment, landscaping, etc., are understood and arranged for.

* Verification, item by item, as applicable, to be submitted with Notice of Acceptance Form SC-6.27.

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<thead>
<tr>
<th>DATE COMPLETED</th>
<th>SIGNOFF INITIALS</th>
<th>REMARKS</th>
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**Architect/Engineer**

**Contractor**

---

**William N. Ward**
Interim Director, Planning, Design & Construction
State Buildings Programs
(or Authorized Delegate)

**Ronald L. Ried, Director**
Facilities Business Services
Principal Representative
(Institution or Agency)

---

State Form SBP-05
Rev. 9/2006
Page 2 of 2
Pursuant to Colorado Department of Public Health and Environment, Air Quality Control Commission Regulation No. 8 Part B – Asbestos, Section V.H.1.d, the undersigned Architect/Engineer and Contractor, as duly authorized representatives for their firms, hereby certify that to the best of his/her knowledge, information and belief, the materials incorporated into the project, and as used during the construction process, are free of any type of asbestos containing materials (ACM). The undersigned acknowledge that not all asbestos building materials have or were ever completely banned (EPA/TSCA-1999).

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.

1. The Notice of Approval of Occupancy/Use has been fully executed and the Inspection Cards are completely signed-off.
2. Schedule for corrections, deficiencies, and items to be supplied are established by Contractor.
3. Final Change Orders are processed (must be completed prior to Notice of Acceptance).
4. The Principal Representative shall not authorize final payment until all items on the punch list have been completed, the Notice of Acceptance issued and the Notice of Contractor’s Settlement Date is published.
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. Removal of Contractor’s temporary work including cleanup and debris removal.
10. State personnel are instructed in system and equipment operations as required by contract.
11. All Instructions, manuals, guides, and charts have been transmitted to Principal Representative.
## Approvals

<table>
<thead>
<tr>
<th>Architect/Engineer</th>
<th>Date</th>
<th>Contractor</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
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<tr>
<th>State Buildings Programs (or Authorized Delegate)</th>
<th>Date</th>
<th>Principal Representative (Institution or Agency)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>William N. Ward, AIA Interim Director, Planning, Design &amp; Construction</td>
<td></td>
<td>Ronald L. Ried, Director Facilities Management Business Services</td>
<td></td>
</tr>
</tbody>
</table>
TO: Jon C. Keiser, Project Manager
University of Colorado Boulder
Department of Housing & Dining Services
Campus Box 451 UCB
Boulder, CO 80309-0451
(Principal Representative)

And Enter GC Name here
(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 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, Inspection Cards completely signed-off or a Temporary Certificate, or Certificate, of Occupancy has been issued, 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 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.
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 Programs.
TO:

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

By
William N. Ward, AIA
Interim Director, Planning, Design & Construction
State Buildings Programs
(Authorized Delegate)

By
Ronald L. Ried, Director
Facilities Management Business Services
Principal Representative
(Institution or Agency)

*When completely executed, this form is to be sent by certified mail to the Contractor by the Principal Representative.
# NOTICE OF APPROVAL OF OCCUPANCY/USE

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

**Institution/Agency:** University of Colorado Boulder

**Project No./Name:** PR007793/HSG10818  CAMP - WV - Elevator Modernization - Phase II

**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.

<table>
<thead>
<tr>
<th>Date Completed</th>
<th>A/E Signoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The Notice of Substantial Completion has been issued and the Building Inspection Record is Cards are completely signed-off (or a Temporary Certificate, or Certificate, of Occupancy has been issued and copies attached.</td>
</tr>
<tr>
<td>2a.</td>
<td>Notification has been made to the local Fire Department concerning which portion(s) of the building will be occupied and the date(s).</td>
</tr>
<tr>
<td>2b.</td>
<td>Fire alarms, smoke detection systems and building fire sprinkler systems have been fully checked and are operable.</td>
</tr>
<tr>
<td>2c.</td>
<td>The building’s fire connections must be installed and operable, if applicable.</td>
</tr>
<tr>
<td>3.</td>
<td>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.</td>
</tr>
<tr>
<td>4.</td>
<td>Sterilization of plumbing systems has been performed.</td>
</tr>
<tr>
<td>5.</td>
<td>Operational test of systems and equipment has been performed as required.</td>
</tr>
<tr>
<td>6.</td>
<td>Systems adjustments such as balancing, equipment operations, etc., have been performed. Reports have been submitted to the Architect/Engineer for approval.</td>
</tr>
<tr>
<td>7.</td>
<td>Principal Representative furnished equipment and furnishings are coordinated and placed.</td>
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<tr>
<td>8.</td>
<td>All elements left unfinished must be in such condition that there would be no hazard to the health or safety of the occupants.</td>
</tr>
<tr>
<td>9.</td>
<td>All restroom facilities must be fully functional and operable.</td>
</tr>
<tr>
<td>10.</td>
<td>All light fixtures must be installed and operable.</td>
</tr>
<tr>
<td>11.</td>
<td>All exit lights and emergency lighting systems have been checked and are operable.</td>
</tr>
<tr>
<td>12.</td>
<td>All windows have been glazed and hardware is available for ventilation purposes.</td>
</tr>
<tr>
<td>13.</td>
<td>All routes of egress must be clear of construction materials and debris at all times.</td>
</tr>
<tr>
<td>14.</td>
<td>There must be a means of pedestrian access to each building. Contractor must have sidewalks installed before occupancy and pedestrian barricades and other means of public protection as required.</td>
</tr>
</tbody>
</table>

Occupancy does not constitute acceptance of the project as being complete. It simply provides the Principal Representative the opportunity to occupy/use the project or the applicable portion thereof prior to final completion and acceptance. Occupants can expect to be impacted by the Contractor’s efforts to complete the project. The Contractor would not repair any damage caused by the occupants.

<table>
<thead>
<tr>
<th>Architect/Engineer</th>
<th>Principal Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>(Institution or Agency)</td>
</tr>
<tr>
<td>Ronald L. Ried, Director</td>
<td></td>
</tr>
<tr>
<td>Facilities Management Business Services</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State Buildings Programs</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>(or Authorized Delegate)</td>
<td>Date</td>
</tr>
<tr>
<td>William N. Ward, AIA</td>
<td></td>
</tr>
<tr>
<td>Interim Director, Planning, Design &amp; Construction</td>
<td>Date</td>
</tr>
</tbody>
</table>
STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAMS

NOTICE OF CONTRACTOR’S SETTLEMENT

Institution/Agency: University of Colorado Boulder
Notice Number: 
Project No./Title: PR007793/HSG10818 CAMP – WV – Elevator Modernization – Phase II

Notice is hereby given that on at Department of Facilities Management, 1540 30th Street, Room 303, Campus Box 453 UCB, Boulder, CO 80309, final settlement will be made by the STATE OF COLORADO with 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: Jon C. Keiser
Approval Date: 
Agency: University of Colorado Boulder
Phone: 303-735-3707
Fax: 303-492-4082
Email: Jon.keiser@colorado.edu (project manager)

MEDIA OF PUBLICATION:

PUBLICATION DATES:
First:

NOTES TO EDITOR:

Transmit one copy of the Affidavit of Publication, and invoice, to: University of Colorado Boulder, Department of Facilities Management, Campus Box 453 UCB, Boulder, CO 80309-0453.
Post Construction Warranty Report

Project: PR007793/HSG10818  CAMP – WV – Elevator Modernization – Phase II

Warranty Contractor: ___________________________ Date Warranty Begins: ______________
Date Warranty Expires: _______________________

Facilities Management (F/M)  FAX No. 303-492-4082 Reported By: _______________________
Campus Box 453 UCB, Boulder, CO  80309-0453 F/M Rep. Informed: _____________________

Date Reported: _______________________________ Taken By: ___________________________

Extended Warranty Item:

Description of Warranty Item:

Date Reported to Contractor: ________________________________

Contractor Response:

Date of Resolution: _________________________________

Note:

Post construction warranty rpt
AMENDMENTS/CHANGE ORDER SUMMARY

<table>
<thead>
<tr>
<th>Prior amendments / Change Orders</th>
<th>Deductions (L)</th>
<th>Additions (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO#s:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
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</tbody>
</table>

Application is made for Progress for work completed and in place and stored on site on the above Project. As indicated on the following page(s).

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>DATE</th>
</tr>
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</table>

PRESENT CONTRACT TOTAL (N/E) $0.00

<table>
<thead>
<tr>
<th>Current to Date Total Amount Earned (Due to Date (I))</th>
<th>Retainage</th>
<th>Current to Date Payment Less Retainage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td></td>
<td>$0.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Prior Payments Total Amount Earned</th>
<th>Retainage</th>
<th>Prior Payments Less Retainage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td></td>
<td>$0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>This Payment Total Amount Earned</th>
<th>Retainage</th>
<th>This Payment Less Retainage</th>
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</thead>
<tbody>
<tr>
<td>$0.00</td>
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<td>$0.00</td>
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Net change by Amendments / Change Orders (L + M) $0.00

Contractor certifies that all work and materials included in this estimate complies with the terms and conditions of the conditions construction contract and authorized changes thereto.

<table>
<thead>
<tr>
<th>STATE BUILDINGS PROGRAMS (or Authorized Delegate)</th>
<th>Date</th>
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</thead>
</table>

ARCHITECT/ENGINEER'S CERTIFICATION

In accordance with the Contract and this Application for Payment, the above Contractor is entitled to a payment of: $0.00
**CONTRACTOR’S APPLICATION FOR PAYMENT**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description of Work</th>
<th>Material</th>
<th>Labor and Other</th>
<th>Totals (C + D)</th>
<th>Materials On-Site But Not In Place</th>
<th>WORK IN PLACE</th>
<th>Total Amount Due to Date (E + G + H)</th>
<th>% Complete and in Place (I / E)</th>
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<tbody>
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<tr>
<td>(K)</td>
<td>ORIGINAL CONTRACT TOTALS (SUM)</td>
<td>$0.00</td>
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<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>#DIV/0!</td>
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<tr>
<td>(L)</td>
<td>AMENDMENTS/CHANGE ORDER DEDUCTIONS</td>
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<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>#DIV/0!</td>
</tr>
<tr>
<td>(M)</td>
<td>AMENDMENTS/CHANGE ORDER ADDITIONS</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>#DIV/0!</td>
</tr>
<tr>
<td>(N)</td>
<td>PRESENT CONTRACT TOTALS</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
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# PROJECT SUBMITTAL LOG

**Project:** PR007793/HSG10818  CAMP - WV - Elevator Modernization - Phase II

<table>
<thead>
<tr>
<th>Spec. Section No.</th>
<th>Sub No.</th>
<th>Contr No.</th>
<th>Description</th>
<th>CONTR/ SUB CONTR</th>
<th>Submit Date</th>
<th>Date Rec From Contr</th>
<th>No. of Copies Rec A</th>
<th>Date Returned to Architect</th>
<th>Action</th>
<th>Date Returned to Contractor</th>
<th>Distribution copies Transmitted to/from</th>
<th>DAYS OUT TO Architect</th>
<th>DAYS OUT TO Contractor</th>
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<tbody>
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**NOTES:**

a. The Submittal Log lists the specification section that requires submittals. It is the Contractor’s responsibility to reference the appropriate subsection of the specification section for specific individual submittal requirements and to submit accordingly.

b. The Submittal Log does not necessarily list all specification sections that require submittals. The Contractor is responsible for any additional submittals that may be called for and required on drawings in the individual schedules and notes.
1.01 CONDITIONS AND REQUIREMENTS

Division 1 - General Requirements shall govern work under all Divisions of the Specifications.

1.02 SPECIFICATION LANGUAGE EXPLANATION

Specifications are of abbreviated, simplified or streamlined type and include incomplete sentences. Omissions of words or phrases such as "the Contractor shall," "in conformity therewith," "shall be," "as noted on the Drawings," "a," "the" are intentional. Supply omitted words or phrases by inference in same manner as they are when "NOTE" occurs on Drawings. Supply words "shall be" or "shall" by inference when colon is used within sentences or phrases. Supply words "on the Drawings" by inference when "as indicated" is used with sentences or phrases.

Where reference is made to specifications, societies, institutes, or associations or manufacturer’s directions, they are, except as may be inconsistent herewith, made part of specifications, to same extent as if written out in full herein. Use latest edition, at time of bidding, if a date is not given.

1.03 SUBMITTALS

A. Prepare data for use by the University of Colorado, Facilities Management personnel.

B. Format:
   1. Submit electronically in **Portable Document Format** (PDF) format as one document, OCR (Optical Character Recognition) searchable, bookmarked according to the Construction Specifications Institute (CSI) standards.
   2. Title shall be "SPECIFICATIONS", and shall include:
      a. Name of project and submittal stage and date of submittal (month, day, and year).
      b. University of Colorado Project number (Include on cover and in header or footer of each page)

1.04 CONTENT OF MANUAL

A. An electronically-written table of contents shall be provided for each volume, arranged according to CSI standards.

Include the following:
   1. Name of responsible installing principal contractor, address, and telephone number.

1.05 ABBREVIATIONS

References in Contract Documents to trade associations, technical societies, recognized authorities and other institutions include following organizations, which are sometimes referred to only by corresponding abbreviations:

AA  Aluminum Association
AAMA  Architectural Aluminum Manufacturer's Association
ACI  American Concrete Institute
AIMA  Acoustical and Insulating Materials Association (successor to AMA and IBI)
AISC  American Institute of Steel Construction
AISI  American Iron and Steel Institute
AITC  American Institute of Timber Construction
AMA  Acoustical Materials Association
ANSI  American National Standards Institute (successor to USASI and ASA)
APA  American Plywood Association
ASHRAE  American Society of Heating, Refrigerating and Air Conditioning Engineers
ASTM  American Society for Testing Materials
AWI  Architectural Woodwork Institute
AWPA  American Wood Preservers Association
AWS  American Welding Society
CDA  Copper Development Associations, Inc.
CM/GC  Construction Manager/General Contractor
CRA  California Redwood Association
CRSI  Concrete Reinforcing Steel Institute
CS  Commercial Standard (U.S. Department of Commerce)
DFPA  Douglas Fir Plywood Association
EPA  Environmental Protection Agency
FGMA  Flat Glass Marketing Association
FIA  Factory Insurance Association
FM  Factory Mutual Engineering Division
FS  Federal Specification
MIA  Marble Institute of America
MIL  Military Specification
MILMA  Metal Lath Manufacturer's Association
NAAAMM  The National Association of Architectural Metal Manufacturers
NBFU  National Board of Fire Underwriters
NBS  National Bureau of Standards
NCMA  National Concrete Masonry Association
NEC  National Electric Code (of NBFU)
NEMA  National Electrical Manufacturers' Association
NFPA  National Fire Protection Association
NIOSH  National Institute of Occupational Safety and Health
NMWIA  National Mineral Wool Insulation Association
NPVLMA  National Paint, Varnish and Lacquer Manufacturers' Association
NTMA  The National Terrazzo and Mosaic Association
OSHA  Occupational Safety and Health Administration
PCA  Portland Cement Association
PCI  Prestressed Concrete Institute
PEI  Porcelain Enamel Institute
PS  Product Standard (U.S. Department of Commerce)
SCPI  Structural Clay Products Institute
SDI  Steel Deck Institute
SJII  Steel Joist Institute
SMACNA  Sheet Metal and Air Conditioning Contractor's National Association
SPA  Southern Pine Association
SPI  The Society of Plastic Industry, Inc.
SPR  Simplified Practice Recommendation (U.S. Department of Commerce)
SSPC  Steel Structures Painting Council
SWI  Steel Window Institute
SECTION 01000        GENERAL

TCA       Tile Council of America
UL        Underwriters’ Laboratories, Inc.
WCLA      West Coat Lumbermen’s Association
WRI       Wire Reinforcement Institute
WWPA      Western Wood Products Association

1.04  LAYING OUT WORK

The Contractor will furnish reference bench mark and maintain bench mark and all other grades, lines, and levels and dimensions as indicated in the Contract Documents. Report any errors or inconsistencies in above to Owner before commencing work.

Except as delegated by subcontract or normal trade practice, the Contractor will be responsible for all lines, elevations, and measurements of work indicated.

1.05  EXAMINATION OF SITE

Failure to visit the site will in no way relieve any Contractor from the necessity of furnishing materials or performing work that may be required to complete work in accordance with the Contract Documents without additional cost to Owner.

END OF SECTION
PART 1 - GENERAL

1.01 SCHEDULE OF DRAWINGS, SPECIFICATIONS AND ADDENDA

The following Drawings, Project Manual, and Addenda from the Contract Documents.

A. Set(s) of Drawings & specifications dated December 17, 2013. Drawing list is as follows:
   No drawings issued for this project, only specifications listed below:
   Section 01000 General
   Section 01010 Summary of Work
   Section 01020 Administration and Supervision
   Section 01041 Project Coordination
   Section 01042 Mechanical and Electrical Coordination
   Section 01045 Cutting and Patching
   Section 01060 Regulatory Requirements
   Section 01075 Specification System
   Section 01100 Special Project Procedure
   Section 01121 Hazardous Material Procedures
   Section 01200 Project Meetings
   Section 01300 Submittals, Shop Drawings, Product Data and Samples
   Section 01400 Quality Control
   Section 01500 Temporary Facilities
   Section 01600 Material and Equipment
   Section 01700 Contract Closeout
   Section 01710 Cleaning
   Section 01720 Project Record Documents
   Section 01730 Operating and Maintenance
   Section 01740 Commissioning Requirements
      Project Intent Narrative – Lerch Bates Inc.
   Section 01400 Project Procedures – Lerch Bates Inc.
   Section 01300 Submittals – Lerch Bates Inc.
   Section 01700 Final Contract Compliance Review – Lerch Bates Inc.
   Section 01900 Related Work
   Section 14220 Modernization (Stearns West) – Lerch Bates Inc.
   Section 14230 Modernization (Darley South) – Lerch Bates Inc.
   Section 14210 UCB Campus Standards

B. Project Manual titles: Williams Village Elevator Modernization – Phase II
dated December 17, 2013.

C. Addenda: All Addenda issued prior to bidding.
1.02 WORK COVERED BY CONTRACT DOCUMENTS

A. Work covered: Work under this contract includes all materials, equipment and labor necessary to complete the work indicated on the drawings, described in specifications, addenda or reasonably inferred.

1.03 CONTRACTORS

All work will be executed under one prime construction contract between the Owner and the Contractor. Except as indicated otherwise, all work under this contract will be under the direction of the prime contractor.

Any asbestos removal and/or general demolition will be completed by Owner under separate contract.

1.04 JOB CONDITIONS

A. Areas of the building immediately adjacent to areas under construction will be occupied by the public during the work of this project. Conduct the work of this project in a manner that will minimize disruption of the Owner's occupancy of adjacent areas.

B. Do not interrupt building access and use, except as permitted by the Owner.

Provide eight (8) work days notice to the Owner of construction activities which will severely impact the occupancy and use of adjacent areas.

C. Provide temporary barriers and/or partitions as required to protect the occupants of the building and the general public from injury due to the work of this project; and/or to protect adjacent areas of the building from the spread of dust and dirt caused by the work or this project.

Remove temporary barriers and partitions upon completion of the Project.

1. Temporary partitions shall be constructed of 1/2" plywood on the construction face nominal 2" X 4" wood studs and 1/2" gypsum wallboard on the public occupied face.

D. Do not interrupt power, lighting, plumbing, telephone and HVAC services to occupied areas without Owner's approval. Such interruptions must be scheduled at least eight (8) work days in advance and have Owner's approval.

1.05 PROTECTION OF WORK AND ADJACENT PROPERTY

A. Buildings and property adjacent to work included in this project may be subject to damage due to construction operations.

Prior to the start of the work included in this Contract engage the services of a photographer to record the existing condition of adjacent structures and property. Contractor shall provide one set set on disk to the Owner and retain one set for their records. Sufficient photos with adequate detail to thoroughly document the conditions surrounding the work shall be provided.

B. At the completion of the project, Contractor shall restore existing buildings, landscaping, parking facilities and property to same condition as prior to the start of the work.
C. In addition to the requirements of the General Conditions of the Contract for Construction, the Contractor shall:

1. Notify, in writing, the Owner of University or private property which interferes with the work and arrange with them for disposition of such property.

2. Provide and maintain proper shoring and bracing to prevent earth from caving or washing into excavation. Provide temporary protection around openings through and at floors, roofs, and other openings.

3. Provide and maintain proper shoring and bracing for existing underground utilities, sewers, etc., encountered during excavation work, to protect them from collapse or other type of damage until such time as they are to be removed, incorporated into the work of this project, or can be properly back-filled upon completion of new work.

4. Weather Protection: Provide protection against rain, snow, wind, ice, storms, or heat so as to maintain work, materials, apparatus, and fixtures free from injury or damage. At the end of each day’s work, cover new work likely to be damaged.

5. Provide and maintain adequate protection of the work from damage due to freezing, especially freezing earth and soils. Risk of proceeding with the work on or with freezing or frozen materials will be the sole responsibility of the Contractor.

6. Water Protection: Provide protection from damage at all times from rain water, ground water, backing up of drains or sewers, and other water. Provide pumps and equipment enclosures to provide this protection.

7. The Contractor will maintain free of obstructions and debris, all designated corridors and emergency exits, handicap access ramps and sidewalks to building. Provide temporary directional handicapped signage for routing to the nearest accessible facilities.

1.06 EXISTING FURNITURE AND EQUIPMENT

The Owner will remove or relocate existing movable furniture and equipment from the areas in which the Contractor is working. Notify the Owner not less than three days prior to starting work in areas where furniture and equipment require moving.

1.07 CONTRACTOR’S ACCESS PARKING AND STAGING AREAS

A. Work included in this project will need to be performed within the limitations of available access at the site. The University shall limit the area available for staging and parking due to the additional number of construction projects planned during the execution of this contract. Contractor shall adjust the means and methods of construction to allow for the restrictions surrounding the site.

B. All parking on campus except for some one-hour zones on city streets and a few metered spaces is under control and authority of the Parking and Transportation Services (PTS) of the University. All University parking is by permit only.

C. Types of parking and staging are defined as follows:

General Staging Areas are approved areas adjacent to the site when available or in University designated group staging yards. General Staging Areas may be used for any purpose, including employee parking, on a space available basis, but must be coordinated through the UCB Project Manager and PTS. Vehicles may not park outside of general staging areas except in areas coordinated and approved by PTS.

Restricted Staging Areas are approved areas near the site for the construction dumpster, off-loading of equipment, contractor’s work trailer, and materials that are soon to be incorporated into the work. No vehicles shall park in a restricted staging area for more than 20 minutes between the hours of 8:00 a.m. and 5:00 p.m. weekdays.
Contractor Employee Parking are Contractor paid areas for workers needing parking on campus. Coordinate through UCB Project Manager and PTS.

Prohibited Parking are areas designated in the Contract Documents as No Parking areas. The contractor shall not allow any parking in areas so designated under any circumstance.

D. The restrictions in this Section are in addition to any other restrictions or rules provided by PTS. Fees shall be assessed for the use of any PTS facility for staging and construction activities.

E. The designated staging area for this project shall be:

In the basement of Stearns West and Darley North, UCB PM will review with Contractor exact location prior to Contractor mobilization.

1.08 OCCUPANCY REQUIREMENTS

A. Owner may occupy designated areas for the purpose of storage of furnishings and equipment and installation of equipment.

B. Execute Certificate of Substantial Completion for each designated portion of work prior to Owner occupancy. Contractor shall allow:
   1. Access for Owner personnel.
   2. Use of parking facilities.
   3. Operation of HVAC and electrical systems.

C. On occupancy, Owner will provide, for occupied areas:
   1. Operation of HVAC and electrical systems.

1.09 CONSTRUCTION AND SEQUENCE SCHEDULE:

A. In order to accommodate the uninterrupted operation of the existing building during the various phases of construction, the sequence of construction operations shall be as follows:
   1. The sequence concept is to: (1) prepare the existing facility to function during renovation through completion; (2) thence occupy the newly remodeled portion; and (3) upon completion, finally reoccupy the remodeled portions.
   2. Utilizing this concept break down the Schedule into broad scope categories augmented by “Owner Action” and “Contractor action” columns that indicate coordination tasks which define the various phases of the work.
   3. The intent of the categorization is to generally summarize the nature and extent of work to be performed without in any way limiting specific requirements of the Contract Documents.
   4. Some overlapping between the several construction operations will occur, and where possible, permission may be granted to start certain portions of the work before the previous operations were completed in their entirety. Such detail scheduling shall be done as the work progresses, provided that the Owner’s operations remains uninterrupted, but in all cases must receive Owner approval.
   5. Where it may not be possible to complete certain mechanical and electrical services in connection with making the work complete and ready for occupancy, temporary services as directed and as approved shall be installed to permit occupancy by the Owner at the earliest possible date.
6. The construction sequence schedule and related drawings are intended to aid the Contractor in bidding and in the preparation of a specific construction schedule. Deviations of sequence may be made upon approval of the Owner and the Architect. The preparation of a specific construction schedule remains the responsibility of the Contractor.

1.10 TEMPORARY ELECTRIC SERVICE

A. Connect to existing power service. Power consumption shall not disrupt owners need for continuous service. **Owner** to pay for power consumed. Provide power outlets for construction operations, branch wiring, distribution boxes, and flexible power cords as required.

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.02 SURVEYS, LAYOUTS, AND LEVELS

A. General: Working from lines and levels established by the existing building, and as shown in relation to the work, establish and maintain bench marks and other dependable markers to set the lines and levels for the work of construction as needed to properly locate every element of the work of the entire project. Calculate and measure required dimensions as shown (within recognized tolerances if not otherwise indicated); do not scale the drawings to determine dimensions. Continuously advise tradesmen performing the work of the marked lines and levels provided for use in the layout of work.

1.03 PROJECT RECORD DOCUMENTS

A. Maintain at job site, one copy of:
   1. Contract Drawings
   2. Specifications
   3. Addenda
   4. Reviewed Shop Drawings
   5. Change Orders
   6. Other Modifications to Contract
   7. Field Test Records
   8. As-Built Drawings

B. Maintain documents in clean, dry, legible condition and do not use record documents for construction purposes. Make documents available at all times for inspection by the Consultant and Owner.

C. Label each document "Project Record" in 1" or larger printed letters.

D. Record drawing information in colored pencil with different colors for the various systems and defined by color legend.

E. Record drawings and specifications shall include the following:
   1. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure. Location of concealed valves, dampers, controls, balancing devices, junction boxes, clean-outs, and other items requiring access or maintenance.
   2. Field changes of dimension and detail, changes made by Change Order or Field Order and details not on original contract drawings.
   3. Fire protection and alarm systems shop drawings.
F. Submit all record drawings to the Consultant at the completion of the project.

1.04 CLEANING

A. Cleaning and Protection Work: At the time each unit of work or element of the construction is completed (substantially) in each area of the Project, clean the unit or element to a condition suitable for occupancy and use (as intended), and restore minor or superficial damage. Replace units and elements which are damaged beyond successful restoration. Clean and restore adjoining surfaces and other work which was soiled or damaged (superficially) during the installation; replace other work damaged beyond successful restoration. Where the performance of subsequent work could possibly result in damage to the complete unit or element, provide protective covering or other provisions to minimize possible damage. Repeat cleaning and protection operations during remainder of construction period, wherever work might otherwise be damaged by sustained soiling or exposure.

B. During Construction: Oversee cleaning and ensure that building, grounds, and public properties are maintained free from accumulation of waste materials and rubbish. At reasonable intervals during daily progress of work, clean up site and access and dispose of waste materials, rubbish, and debris. Vacuum clean interior building areas when ready and continue vacuum cleaning on an as-needed basis until building is ready for acceptance or occupancy.

1.05 PROJECT SIGN

Erect no project sign or job-site sign of any kind, except warning signs as specified in Section 01500, without written authorization of the Owner.

1.06 COORDINATION

A. The Contractor shall coordinate the work so as not to interfere with the building custodian's normal cleanup activities.

B. The Contractor shall be responsible for coordinating all the work of the project. The Contractor shall coordinate the efforts of all subcontractor(s) and the deliveries of suppliers so that the work progresses in an orderly fashion without delay towards timely completion of a complete project in accordance with the drawings and specifications.

C. The Contractor shall note that concurrent with his work, other contractors, suppliers, and the Owner's facilities and maintenance personnel may be working in relatively close proximity. The Contractor will be solely responsible for coordinating his work with that of other contractors and will make no claims for failure to do so.

1.08 METHODS OF CONSTRUCTION

A. The procedure and method of construction is the prerogative and the responsibility of the Contractor. If professional assistance is required to safely implement method of construction, the Contractor shall, on his own, employ professional help.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. General Contractor is responsible for all of the work of this contract.
   1. Assign and subcontract portions of the work as required to assure that all work is
      constructed in compliance with these documents.
   2. Coordinate the work of the several subcontractors for the project.
   3. Coordinate work of this contract with work by separate contractors.

B. Each subcontractor shall:
   1. Coordinate work of his own employees and subcontractors.
   2. Expedite his work to assure compliance with schedules.
   3. Coordinate his work with that of other subcontractors and work by separate contractor.
   4. Comply with orders and instructions of owner.

C. Related Requirements
   1. All Division 1 Sections.

1.02 CONSTRUCTION ORGANIZATION AND START-UP

A. Establish on-site lines of authority and communications.
   1. Attend pre-construction meeting with subcontractors upon commencement of the project.
   2. Establish procedures for intra-project communications.
      a. Submittals.
      b. Reports and records.
      c. Recommendations.
      d. Coordination Drawings.
      e. Schedules.
      f. Resolution of conflicts.
      a. Consult with Architect to obtain interpretation.
      b. Assist in resolution of questions or conflicts which may arise.
      c. Transmit written interpretations to subcontractors, and to other concerned parties.
   4. Assist in obtaining permits and approvals.
      a. Obtain building permits and special permits required for work or for temporary
         facilities.
      b. Verify that subcontractors have obtained inspections for work and for temporary
         facilities.
   5. Control the use of site.
      a. Supervise field engineering and site layout.
      b. Allocate space for each subcontractor's use for field offices, sheds, work and
         storage areas.
      c. Establish access, traffic and parking allocations and regulations.
      d. Monitor use of site during construction.
1.03 CONTRACTOR DUTIES

A. Construction Schedules.
   1. Coordinate schedules with several subcontractors.
   2. Monitor schedules as work progresses.
      a. Identify potential variances between schedules and probable completion dates for each phase.
      b. Recommend adjustments in schedule to meet required completion dates.
      c. Adjust schedules of subcontractors as required.
      d. Document changes in schedule.
   3. Observe work of each subcontractor to monitor compliance with schedule.
      a. Verify that labor and equipment are adequate for the work and the schedule.
      b. Verify that product procurement schedules are adequate.
      c. Verify that product deliveries are adequate to maintain schedule.

B. Process Shop Drawings, Product Data and Samples.
   1. Review for compliance with Contract Documents.
      a. Field dimensions and clearance dimensions.
      b. Relation to available space.
      c. Relation to other trades, equipment and systems.
      d. Submit to Architect.

C. Monitor the use of temporary utilities.
   1. Verify that adequate services are provided and maintained.

D. Inspection and Testing.
   1. Inspection work to assure performance in accord with requirements of Contract Documents.
   2. Administer special testing and inspections of suspected work.
   3. Reject work which does not comply with requirements of Contract Documents.
   4. Coordinate testing laboratory services.
      a. Verify that required laboratory personnel are present.
      b. Verify that tests are made in accordance with specified standards.
      c. Review test reports for compliance with specified criteria.
      d. Recommend and administer required retesting.

E. Monitor contractor's periodic cleaning.
   1. Enforce compliance with specifications.
   2. Resolve any conflicts.

F. Coordinate changes.
   1. Recommend necessary or desirable changes.
   2. Assist owner in negotiating change orders.
   3. Promptly notify all subcontractors of pending changes.

G. Maintain Reports and Records at Job Site available to Architect and Subcontractors.
   1. Log progress of work of each subcontractor.
   2. Records
      a. Contracts.
      b. Purchase orders.
c. Materials and equipment records.
d. Applicable handbooks, codes and standards.

3. Obtain information from subcontractors and maintain file of Project Record Documents.
4. Assemble documentation for handling of claims and disputes.

H. Coordinate work of this Contract and requirements of this section with work by Separate Contract including but not limited to:
   1. Removal of asbestos containing materials by separate contract.

1.04 CONTRACT CLOSEOUT

A. Coordinate equipment start-up.
   1. Provide seven days notification prior to start-up of each item.
   2. Ensure that each piece of equipment or system is ready for operation.
   3. Execute start-up under supervision of responsible persons in accordance with manufacturer's instructions.
   4. Perform required testing and balancing.
   5. Record dates of start of operation of systems and equipment. Submit written report that equipment or system has been properly installed and is functioning correctly.
   6. Provide written notice of beginning of warranty period for equipment put into service.

B. Demonstration and Instructions
   1. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to Substantial Completion.
   2. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, seasonal operation, and shutdown of each item of equipment.

C. At completion of work of each Section, conduct an inspection to assure that
   1. Specified cleaning has been accomplished.
   2. Temporary facilities have been removed from site.

D. At completion
   1. Conduct an inspection to list work to be completed or corrected.
   2. Supervise correction and completion of work as established in Certificate of Completion.

E. When a portion of the Project is occupied prior to final completion, coordinate established responsibilities of each subcontractor.

F. Final completion.
   1. When each Subcontractor determines that work is finally complete, conduct an inspection to verify completion of work.
   2. Assist owner and architect in inspection.

G. Administer contract closeout.
   1. Receive and review Subcontractor's final submittals.
   2. Transmit to architect with recommendation for action.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Carefully coordinate the interface between Division 15 (Mechanical) and Division 16 (Electrical) before submitting any equipment for review or commencing installation.

B. Responsibility: Unless otherwise indicated, all motor and controls for Division 15 equipment shall be furnished, set in place and wired in accordance with the following schedule:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>FURNISHED UNDER</th>
<th>SET IN PLACE UNDER</th>
<th>POWER WIRING UNDER</th>
<th>CONTROL WIRING UNDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment Motor</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Automatically Controlled</td>
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<tr>
<td>Starter/contractors:</td>
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<tr>
<td>Separate</td>
<td>15</td>
<td>16</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Factory Mounted &amp; Wired</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
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<tr>
<td>In Motor Control Centers</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Manually Controlled</td>
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<td></td>
</tr>
<tr>
<td>Starter/Contractors:</td>
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<td></td>
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<tr>
<td>Separate</td>
<td>15</td>
<td>16</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Factory Mounted &amp; Wired</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Motor Speed Controllers</td>
<td>15</td>
<td>16</td>
<td>16</td>
<td>16</td>
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<tr>
<td>Disconnect (Note 1) Switches</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>-</td>
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<tr>
<td>Contactors</td>
<td>16</td>
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<tr>
<td>Thermal Overload (Note 1) Switches</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>-</td>
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<tr>
<td>Manual Operation (Note 2)</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Switches</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Control Relays (Note 2)</td>
<td>15</td>
<td>15</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>Control Transformers</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
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<tr>
<td>Control Circuit Outlets</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Thermostats (Note 2)</td>
<td>15</td>
<td>15</td>
<td>-</td>
<td>15</td>
</tr>
</tbody>
</table>
### Section 01042

#### Mechanical and Electrical Coordination

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Furnished Under</th>
<th>Set in Place Under</th>
<th>Power Wiring Under</th>
<th>Control Wiring Under</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Switches (Note 2) Not in Control Panel</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Push Button Stations, Pilot Lights</td>
<td>16</td>
<td>16</td>
<td>16</td>
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</tr>
<tr>
<td>Thermostats (Note 2) Controls: Integral with Equipment Directly Applied to Ducts, Pipes, etc.</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Valve Motors, Damper Motors, Solenoid Valves, etc.</td>
<td>15</td>
<td>15</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>EP Valves or Switches, P.E. Switches, etc.</td>
<td>15</td>
<td>15</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>Control Circuit Outlets</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Fire Alarm Systems</td>
<td>16</td>
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<tr>
<td>Fire Sprinkler Alarm</td>
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<td>16</td>
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<tr>
<td>Firestats</td>
<td>16</td>
<td>16</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Smoke Detectors Including Relays, Fan Control</td>
<td>16</td>
<td>16</td>
<td>-</td>
<td>16</td>
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<tr>
<td>Control Air Compressor</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
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<tr>
<td>Refrigerated Air Dryer</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
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<tr>
<td>Equipment Interlocks</td>
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<td>15</td>
</tr>
<tr>
<td>Boiler and Water Heaters</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

**Notes:**

1. If furnished as part of factory wired equipment furnished and set in place under Division 15, wiring and connections under Division 16.
2. If float switches, line thermostats, P.E. switches, time switches, or other controls carry the FULL LOAD CURRENT to any motor, they shall be furnished under Division 15, but they shall be set in place and connected under Division 16 except that where such items are an integral part of the mechanical equipment, or directly attached to ducts, piping, or other mechanical equipment, they shall be set in place under Division 15 and connected under Division 16. If they do not carry the FULL LOAD CURRENT to any motor, they shall be furnished, set in place and wired under Division 15.
C. Control Wiring: Consists of wiring in pilot circuits of contact or starters, sensors, controllers, and relays, and wiring for valve and damper operators.
   1. Connections: Connections to all controls directly attached to ducts, piping and mechanical equipment shall be made with flexible connections.

D. Starters: Provide magnetic starters for all three phase motors and equipment complete with:
   1. Control transformers.
   2. 120V holding coils.
   3. Integral hand-off-auto switch.
   4. Auxiliary contacts required for system operation plus one (1) spare.

E. Remote Switches and Push Button Stations: Provide all remote switches and/or push button stations required for manually operated equipment (if no automatic controls have been provided) complete with pilot lights of an approved type lighted by current from load side of starter.

F. Special Requirements: Motors, starters and other electrical equipment installed in moist areas or areas of special conditions, such as explosion proof, shall be designed and approved for installation in such areas with appropriate enclosure.

G. Identification: Provide identification of purpose for each switch and/or push button station furnished. Identification may be either engraved plastic sign or permanent mounting to wall below switch, or stamping on switch cover proper. All such identification signs and/or switch covers in finished areas shall match other hardware in the immediate areas.

H. Control Voltage:
   1. Maximum allowable control voltage 120V. Fully protect control circuit conductors in accordance with National Electrical Code.
   2. Provide 20A breakers in emergency panels under Division 16 as required for Building Management System Air Temperature Controls (BMS/ATC). Provide all control transformers, control wiring and connections to circuits under Section 15950 of Division 15.

I. Related Requirements
   1. Section 16480: Electric Motors
      a. Coordinate with efficiency requirements.

J. Contractor must review all concrete embedded items (including conduit) with owner prior to placement.
PART 2 - PRODUCTS

2.01  MOTOR HORSEPOWER

   A.  In general, all motors 1/2 HP and above shall be three phase, all motors less than 1/2 HP shall be single phase.

   B.  Voltage and phase of motors as scheduled on the electrical drawings shall take precedence in the case of a conflict between the mechanical and electrical drawings or General Condition 2.01 A., above.

   C.  Work under Division 15 includes coordinating the electrical requirements of all mechanical equipment with the requirements of the work under Division 16, before ordering the equipment.

       1.  If motor horsepower is changed under the work of Division 15, without a change in duty of the motor's driven device, coordination of additional electrical work (if any) and additional payment for the work (if any) shall be provided under the section of Division 15 initiating the change. Increases or decreases in motor horsepower from that specified shall not be made without written approval from the Engineer.

PART 3 - EXECUTION

NOT USED.

END OF SECTION
PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included: This section establishes general requirements in addition to those indicated in the General Conditions of the Contract for Construction pertaining to cutting, fitting, and patching of the work required to:
   1. Make the several parts fit properly.
   2. Uncover work to provide for installation, inspection, or both, of ill-timed work.
   3. Remove and replace work not conforming to requirements of Contract Documents.
   4. Patch new construction into existing construction.

B. Related Work:
   1. In addition to requirements specified, upon the Consultant's request, uncover work to provide for inspection of covered work, and remove samples of installed materials for testing.
   2. Do not cut or alter work performed under separate contract without the Consultant's written permission.

1.02 QUALITY ASSURANCE

A. Perform all cutting and patching in strict accordance with pertinent requirements of the Specifications and, in the event no such requirements are determined, in conformance with the Consultant's written direction.
   1. Use skilled workmen to perform all cutting and patching work.
   2. Use methods least likely to damage existing surfaces and materials to remain, while providing proper surfaces to receive installation of repair, patching, and/or new work.

B. Visual Quality:
   1. Do not cut and patch work exposed to public view, and the exterior and/or interior of the building in a manner that will result in an unacceptable appearance as determined by the Consultant.
   2. Do not cut and patch work in a manner that will result in obvious appearance that cutting and patching work was done.
   3. When cutting existing structural concrete, do not extend saw cuts beyond the corners of the required opening on either side of the opening.

1.03 EXISTING CONSTRUCTION

A. Where cutting and patching of existing construction is required; prior to start of work, inform Owner of existing construction to be disturbed. Owner will determine if elements of existing construction contain asbestos. Do not proceed with work until after Owner has examined areas to be disturbed. Refer to Exhibit A, Project Pre-Inspection for Possible Presence of Asbestos for additional information concerning the possible presence of materials containing asbestos.

1.04 SUBMITTALS

A. Submit proposed cutting and patching procedures in writing for the following categories of work prior to proceeding with this work:
1. Cutting new openings in existing structural concrete walls, parapets, and suspended slabs.
2. Cutting new openings in existing roofs and roofing materials.

B. Submittals shall comply with Section 01300.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Except as otherwise indicated in pertinent sections of these specifications, or as directed by the Consultant, use materials which are identical to existing materials in workmanship, appearance, and performance.

B. If identical materials are not available, match existing as closely as possible, especially existing visual characteristics.

PART 3 - EXECUTION

3.01 INSPECTION

A. Before proceeding, inspect existing conditions, including elements subject to movement or damage during cutting, excavating, backfilling, and patching.

B. After uncovering the work, inspect conditions affecting installation of new work.

C. If uncovered conditions are not as anticipated or if existing construction is not as indicated on the Drawings, immediately notify the Consultant for further instructions.

3.02 PREPARATION

A. Provide shoring, bracing, and support as required to maintain structured integrity of the project.

B. Take all necessary action required to protect adjacent existing surfaces from damage due to the work of this section.

C. Take all precautions necessary to protect existing surfaces and materials, new work, and the work of this section from damage due to adverse weather conditions.

D. Provide temporary support of work to cut and adjacent work to prevent failure or damage due to the work of this section.

E. Properly prepare substrate surfaces exposed during cutting as required to receive the work of this or other sections of these specifications in strict compliance with manufacturer's recommendations and these specifications.
3.03 EXECUTION

A. Perform all required cutting and patching as required or reasonably implied under pertinent sections of these specifications.

B. Perform cutting and demolition by methods which will prevent damage to other portions of the work and will provide proper finished installation complying with the specified tolerances and finishes.

3.04 PERFORMANCE

A. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work. Saw-cut and otherwise isolate areas to be demolished.

B. Repair or otherwise rebuild and/or construct all surfaces affected by cutting and demolition. Execute fitting and adjustment of products to provide totally finished installation to comply with tolerances, finishes, and profiles of adjacent surfaces, whether new or existing.

C. Restore work which has been cut or exposed by demolition; install new construction in compliance with specifications for type of new work to be done or as required to match existing adjacent surfaces. In no case shall any exposed existing surface be left in a raw, marred, or unfinished surface.

D. Refinish entire surfaces as necessary to provide an even finish.
   1. Continuous Surfaces: To nearest intersections.

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 - Specification sections, apply to work of this section.

1.02 SUMMARY:

A. Section Includes:

1. General administrative requirements and procedures and related applicable codes.

1.03 APPROVAL AND RECOMMENDATION AGENCIES:

A. The University of Colorado at Boulder has jurisdiction for the interpretation and enforcement of code requirements for construction of projects.

1.04 CODES:

A. All Contractors shall comply with all applicable codes, ordinances and regulations in effect at the time of bid openings.

APPROVED STATE BUILDING CODES

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.

A. The 2012 edition of the International Building Code (IBC)
   (as adopted by the Colorado State Buildings Program as follows: Chapter 1 as amended, Chapters 2-35 and Appendices C and I)

B. The 2012 edition of the International Mechanical Code (IMC)
   (as adopted by the Colorado State Buildings Program as follows: Chapters 2-15 and Appendix A)

   (as adopted by the Colorado State Buildings Program)

D. The 2011 edition of the National Electrical Code (NEC)
   (National Fire Protection Association Standard 70) (as adopted by the Colorado State Electrical Board)

E. The 2009 edition of the International Plumbing Code (IPC)
   (as adopted by the Colorado Examining Board of Plumbers as follows: Chapter 1 Section 101.2, 102, 105, 107, Chapters 2-13 and Appendices B, D, E, F and G)

   (as adopted by the Colorado Examining Board of Plumbers as follows: Chapter 1 Section 101, 102, 105, 107, Chapters 2-8 and Appendices A, B, and C)

G. The National Fire Protection Association Standards (NFPA)
H. The 2010 edition of the ASME Boiler and Pressure Vessel Code
   (as adopted by the Department of Labor and Employment/Boiler Inspection Section as follows:
   sections I, IV, V, VIII-Divisions 1 and 2 and 3, 1X, X including the 2011 addenda and B31.1, 2010
edition.)

I. The 2011 edition of the National Boiler Inspection Code (NBIC)
   (as adopted by the Department of Labor and Employment/Boiler Inspection Section)

J. The 2012 edition of the Controls and Safety Devices for Automatically Fired Boilers CSD-1
   (as adopted by the Department of Labor and Employment/Boiler Inspection Section)

   (as adopted by the Department of Labor and Employment/Boiler Inspection Section)

   (as adopted by the Department of Labor and Employment/Conveyance Section and as amended
   by ASME International)

   (as adopted by the Department of Labor and Employment/Conveyance Section and as amended
   by ASME International)

N. The 2005 edition of ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts
   (as adopted by the Department of Labor and Employment/Conveyance Section and as amended
   by ASME International)

O. The current edition of the Rules and Regulations Governing the Sanitation of Food Service
   Establishments
   (as adopted by the Department of Public Health and Environment/Colorado State Board of Health)

   (as adopted by the Colorado General Assembly as follows: CRS 9-5-101, as amended, for
   accessible housing)

Note: Additional codes, standards and appendices may be adopted by the state agencies and institutions
in addition to the minimum codes and standards herein adopted by State Buildings Programs.

1. The 2012 edition of the IBC became effective on July 1 of 2013. Consult the state electrical and
   plumbing boards and the state boiler inspector and conveyance administrator and the Division of
   Fire Safety for adoption of current editions and amendments to their codes.

2. Projects should be designed and plans and specifications should be reviewed based upon the
   approved codes at the time of A/E contract execution. If an agency prefers to design to a different
   code such as a newer edition of a code that State Buildings Programs has not yet adopted, the
   agency must contact SBP for approval and then amend the A/E contract with a revised Exhibit C,
   Approved State Building Codes. Please note that the state plumbing and electrical boards
   enforce the editions of their codes that are in effect at the time of permitting not design.

3. The state’s code review agents, or the State Buildings Programs approved agency building
   official, shall review all documents for compliance with the codes stipulated herein. Note: The
   Department of Public Health and Environment, Division of Consumer Protection will review
   drawings for food service related projects.

4. This policy does not prohibit the application of various life safety codes as established by each
   agency for specific building types and funding requirements. NFPA 101 and other standards
   notwithstanding, approved codes will supersede where their minimum requirements are the most
   restrictive in specific situations. If a conflict arises, contact State Buildings Programs for
   resolution.
5. It is anticipated that compliance with the federal Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG) and Colorado Revised Statutes Section 9-5-101 will be met by compliance with the 2012 International Building Code and ICC/ANSI A117.1. However, each project may have unique aspects that may require individual attention to these legislated mandates.

6. The 2006 edition of the International Building Code (IBC) is to be applied to factory-built nonresidential structures as established by the Division of Housing within the Department of Local Affairs.

A. Appendices

Appendices are provided to supplement the basic provisions of the codes. Approved IBC Appendices are as follows:

1. Mandatory
   - IBC Appendix Chapter C - Agricultural Buildings
   - IBC Appendix Chapter I - Patio Covers

2. Optional
   Any non-mandatory appendix published in the International Building Code may be utilized at the discretion of the agency. Use of an appendix shall be indicated in the project code approach.

B. Amendments

1. International Building Code, Chapter 1 as amended

   CHAPTER 1

   SCOPE AND ADMINISTRATION

PART 1—SCOPE AND APPLICATION

SECTION 101

GENERAL

101.1 Title. These regulations shall be known as the Building Code of the Department of Personnel & Administration/Office of the State Architect (DPA/OSA), hereinafter referred to as “this code”.

101.2 Scope. The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

   Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the International Residential Code.
101.4.2 Mechanical. The provisions of the International Mechanical Code shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

101.4.3 Plumbing. The provisions of the International Plumbing Code shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system.

101.4.6 Energy. The provisions of the International Energy Conservation Code shall apply to all matters governing the design and construction of buildings for energy efficiency.

SECTION 102
APPLICABILITY

102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

102.2 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

102.3 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. as further regulated in Sections 102.4.1 and 102.4.2.

102.4.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

102.5 Partial invalidity. In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code or as is deemed necessary by DPA/OSA through its code review agent for the general safety and welfare of the occupants and the public.

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 104
DUTIES AND POWERS OF BUILDING OFFICIAL

104.1 General. DPA/OSA as the building official is hereby authorized and directed to enforce the provisions of this code. DPA/OSA shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

104.2 Plan reviews. DPA/OSA through its code review agent shall review construction documents and issue compliance notices for the erection, and alteration, demolition and moving of buildings and structures and inspect the premises for which such compliance notices have been issued.

104.4 Inspections. DPA/OSA through its code review agent shall make all of the required inspections, or DPA/OSA shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by
a responsible officer of such approved agency or by the responsible individual. DPA/OSA is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise.

104.9 Approved materials and equipment. Materials, equipment and devices approved by DPA/OSA through its code review agent shall be constructed and installed in accordance with such approval.

104.9.1 Used materials and equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by DPA/OSA through its code review agent.

104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, DPA/OSA shall have the authority to grant modifications for individual cases, upon application of the owner or owner’s representative, provided DPA/OSA shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of DPA/OSA.

104.10.1 Flood hazard areas. DPA/OSA shall not grant modifications to any provision required in flood hazard areas as established by Section 1612.3 unless a determination has been made that:

1. A showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render the elevation standards of Section 1612 inappropriate.
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.
4. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.
5. Submission to the applicant of written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that construction below the design flood elevation increases risks to life and property.

104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where DPA/OSA through its code review agent finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

104.11.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, DPA/OSA through its code review agent shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, DPA/OSA through its code review agent shall approve the testing procedures. Tests shall be performed by an approved agency.

SECTION 105
PLAN REVIEWS

105.1 Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge,
alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first contact a DPA/OSA code review agent.

105.2 Work exempt from plan review.
Exemptions from plan review requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Plan review shall not be required for the following:

**Building:**

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m²).
2. Fences not over 6 feet (1829 mm) high.
3. Oil derricks.
4. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIIA liquids.
5. Water tanks supported directly on grade if the capacity does not exceed 5,000 gallons (18,925 L) and the ratio of height to diameter or width does not exceed 2:1.
6. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or story below and are not part of an accessible route.
7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
8. Temporary motion picture, television and theater stage sets and scenery.
9. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 24 inches (610 mm) deep, do not exceed 5,000 gallons (18,925 L) and are installed entirely above ground.
10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
11. Swings and other playground equipment accessory to detached one- and two-family dwellings.
12. Window awnings supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support of Groups R-3 and U occupancies.
13. Non-fixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

**Electrical:**

Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas.

Temporary testing systems: A plan review shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

**Gas:**

1. Portable heating appliance.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

**Mechanical:**

1. Portable heating appliance.
2. Portable ventilation equipment.
3. Portable cooling unit.
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any part that does not alter its approval or make it unsafe.
6. Portable evaporative cooler.
7. Self-contained refrigeration system containing 10 pounds (5 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

**Plumbing:**

1. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a plan review shall be obtained and inspection made as provided in this code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstatement of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, plan review information shall be submitted promptly to DPA/OSA through its code review agent.

105.2.2 Repairs. Application or notice to DPA/OSA through its code review agent is not required for ordinary repairs to structures, replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

105.2.3 Public service agencies. A plan review shall not be required for the installation, alteration or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.

105.4 Validity of compliance notice. The issuance or granting of a compliance notice shall not be construed to be an approval of any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. The issuance of a compliance notice based on construction documents and other data shall not prevent DPA/OSA through its code review agent from requiring the correction of errors in the construction documents and other data.

105.7 Placement of building inspection record. The building inspection record based on the compliance notice inspection recommendations shall be kept on the site of the work until the completion of the project.

SECTION 106
FLOOR AND ROOF DESIGN LOADS

106.1 Live loads posted. Where the live loads for which each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 50 psf (2.40 kN/m²), such design live loads shall be conspicuously posted by the owner in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

106.2 Issuance of notice of approval of occupancy/use. A notice of approval of occupancy/use required by Section 111 shall not be issued until the floor load signs, required by Section 106.1, have been installed.

106.3 Restrictions on loading. It shall be unlawful to place, or cause or permit to be placed, on any floor or roof of a building, structure or portion thereof, a load greater than is permitted by this code.

SECTION 107
SUBMITTAL DOCUMENTS

107.1 General. Submittal documents consisting of construction documents, statement of special inspections, geotechnical report and other data shall be submitted. The construction documents shall be prepared by a registered design professional where required by the statutes of the state of Colorado. Where special conditions exist, DPA/OSA through its code review agent is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: DPA/OSA is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this code.

107.2 Construction documents. Construction documents shall be in accordance with Sections 107.2.1 through 107.2.5.

107.2.1 Information on construction documents. Construction documents shall be dimensioned and drawn upon suitable material. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of

...
107.2.2 Fire protection system shop drawings. Shop drawings for the fire protection system(s) shall be submitted to indicate conformance to this code and the construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.

107.2.3 Means of egress. The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress including the path of exit discharge to the public way in compliance with the provisions of this code. In other than occupancies in Groups R-2, R-3, and I-1, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

107.2.4 Exterior wall envelope. Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

The construction documents shall include manufacturer’s installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system which was tested, where applicable, as well as the test procedure used.

107.2.5 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. DPA/OSA through its code review agent is authorized to waive or modify the requirement for a site plan when the application for plan review is for alteration or repair or when otherwise warranted.

107.3 Examination of documents. DPA/OSA through its code review agent shall examine or cause to be examined the accompanying submittal documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

107.3.3 Phased approval. DPA/OSA through its code review agent is authorized to issue a compliance notice for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such compliance notice for the foundation or other parts of a building or structure shall proceed at the holder’s own risk with the building operation and without assurance that a compliance notice for the entire structure will be granted.

107.3.4 Design professional in responsible charge.

107.3.4.1 General. The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared
by others, including phased and deferred submittal items, for compatibility with the design of the building.

107.3.4.2 Deferred submittals. For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the plan review and that are to be submitted to DPA/OSA through its code review agent within a specified period.

Deferral of any submittal items shall have the prior approval of DPA/OSA through its code review agent. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by DPA/OSA through its code review agent.

Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to DPA/OSA through its code review agent with a notation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by DPA/OSA through its code review agent.

107.4 Amended construction documents. Work shall be installed in accordance with the approved construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

SECTION 108
TEMPORARY STRUCTURES AND USES

108.1 General. DPA/OSA through its code review agent is authorized to issue a compliance notice for temporary structures and temporary uses. Such compliance notice shall be limited as to time of service, but shall not be permitted for more than 180 days. DPA/OSA through its code review agent is authorized to grant extensions for demonstrated cause.

108.2 Conformance. Temporary structures and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure public health, safety and general welfare.

108.3 Temporary power. DPA/OSA through its code review agent is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in NFPA 70.

SECTION 109
FEES

109.1 Payment of fees. Refer to DPA/OSA Building Code Compliance Policy.

SECTION 110
INSPECTIONS

110.1 General. Construction or work for which a plan review is required shall be subject to inspection by DPA/OSA through its code review agent and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the holder of the notice to proceed to cause the work to remain accessible and exposed for inspection purposes. Neither DPA/OSA, its code review agent nor state agency shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

110.2 Preliminary inspection. Before issuing a compliance notice, DPA/OSA through its code review agent is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

110.3 Required inspections. DPA/OSA through its code review agent, upon notification, shall make the inspections set forth in Sections 110.3.1 through 110.3.10.
110.3.1 Footing and foundation inspection. Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94, the concrete need not be on the job.

110.3.2 Concrete slab and under-floor inspection. Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.

110.3.3 Lowest floor elevation. In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the elevation certification required in Section 1612.5 shall be submitted to DPA/OSA through its code review agent.

110.3.4 Frame inspection. Framing inspections shall be made after the roof deck or sheathing, all framing, fire-blocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are approved.

110.3.5 Lath and gypsum board inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.

Exception: Gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly.

110.3.6 Fire- and smoke-resistant penetrations. Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

110.3.7 Energy efficiency inspections. Inspections shall be made to determine compliance with Chapter 13 and shall include, but not be limited to, inspections for: envelope insulation R- and U-values, fenestration U-value, duct system R-value, and HVAC and water-heating equipment efficiency.

110.3.8 Other inspections. In addition to the inspections specified above, DPA/OSA through its code review agent is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by DPA/OSA.

110.3.9 Special inspections. For special inspections, see Section 1704.

110.3.10 Final inspection. The final inspection shall be made after all work required is completed.

110.3.10.1 Floor hazard documentation. If located in a flood hazard area, documentation of the elevator of the lowest floor as required in Section 1612.5 shall be submitted to DPA/OSA prior to the final inspection.

110.4 Inspection agencies. DPA/OSA through its code review agent is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

110.5 Inspection requests. It shall be the duty of the holder of the notice to proceed or their duly authorized agent to notify DPA/OSA through its code review agent when work is ready for inspection. It shall be the duty of the notice to proceed holder to provide access to and means for inspections of such work that are required by this code.

110.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of DPA/OSA through its code review agent. The code review agent, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the holder of the notice to proceed or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the code review agent.
CERTIFICATE OF OCCUPANCY

111.1 Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made, until DPA/OSA has issued a notice of approval of occupancy/use therefor as provided herein. Issuance shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

Exception: Notices of approval of occupancy/use are not required for work exempt from plan review under Section 105.2.

111.3 Temporary occupancy. DPA/OSA is authorized to issue a temporary notice of approval of occupancy/use for discrete portions of work before the completion of the entire work provided that such portion or portions shall be occupied safely.

C. Referenced Codes

1. While not adopted in entirety, portions of the following codes are referenced in the International Building Code (IBC), the International Mechanical Code (IMC), the International Energy Conservation Code (IECC) the International Plumbing Code (IPC), and the International Fuel Gas Code (IFGC). These following codes would be applied as reference standards.

2012 International Fire Code (IFC)
2012 International Existing Building Code (IEBC)

D. Referenced Standards

The IBC, IMC, IECC, IPC and IFGC standards shall be utilized to provide specific, or prescriptive, requirements on how to achieve the requirements established in the code. These standards may be unique to the code or may be derived from other established industry standards. Recognized standards may also be used to show compliance with the standard of duty established by the code.

1.05 OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA):

A. The Contractor shall have sole responsibility for compliance on the job site to all applicable portions of the Occupational Safety and Health Act. The Contractor is responsible for other regulatory requirements as they relate to occupational Health and Safety requirements. For example, NIOSH, ANSI, and MSA.

B. Protection of life, health and public welfare as it relates to the execution of the construction contract is the responsibility of the Contractor. The Owner’s Representative may, at their discretion, observe, inspect, or comment on plans, procedures, or actions employed at the project as they relate to safety of life, health or public welfare. If conditions are imposed by the Owner which interfere with, or imply actions detrimental to safety, written notice shall be returned to the Owner for action prior to affecting any unsafe conditions.

C. Contractors shall use OSHA Lock Out / Tag Out procedures when working with energized equipment.

D. All contractors entering confined spaces owned by CU or while conducting work under contract with CU shall develop a written program and utilize procedures that, at a minimum, comply with all federal, state and local confined space standards and all applicable regulatory requirements. Contractors shall, independent of the University, monitor the space to obtain their own data to ensure a safe entry and exit. Any data generated by a contractor’s confined space entry, should be provided to the Facilities Management confined Space Program Manager.
E. When contractors perform work that may involve Facilities Management controlled permit required confined spaces, Facilities Management will:
   1. Inform contractors of permit required confined spaces and that entry is allowed only after compliance with the confined space entry standard;
   2. Require contractors planning to enter a confined space to provide the Facilities Management Confined Space Program Manager in charge of that space, 48-hour advance notice of such planned entry. The contractors entry will be in accordance with the current Occupational Safety and Health Administration confined space entry standard and a signed document stating such, shall be provided to the FM Confined Space Program Manager prior to entry.

F. The FM Confined Space Program Manager, following receipt of notice of contractor planned entry, will:
   1. Apprise contractor of the hazards identified in the confined space and of any prior experience that is documented on the space;
   2. Appraise the contractor of any precautions or procedures that CU has implemented for the protection of workers in or near the confined space;
   3. Coordinate entry operations with the contractor when both Facilities Management and contractor personnel are working in or around the confined space;
   4. Debrief the contractor at the end of the entry operations regarding hazards confronted or created.

1.06 HOT WORK PERMITS

A. All contractors shall be required to obtain a Hot Work Permit, three (3) working days in advance, for work that involves welding, heat treating, grinding, thawing pipe, hot riveting, soldering and brazing, power driven fasteners and similar activities involving spark, flame or heat. Compliance with the requirements of the applicable fire code, the International Building Code, and NFPA Standard 51B are mandatory and all contractors performing hot work activities shall read and understand these code requirements. To obtain a current Hot Work Permit, go to website: [http://fm.colorado.edu/firesafety/hotwork.html](http://fm.colorado.edu/firesafety/hotwork.html)

B. Contractors shall read and comply with the procedures and requirements for Fire Watch, Fire Alarm Interruption and Fire Suppression Interruption as found on the following websites:

   Fire Watch Procedures: [http://fm.colorado.edu/firesafety/firewatch.html](http://fm.colorado.edu/firesafety/firewatch.html)

   Fire Alarm and Detection System Interruption/Outage: [http://fm.colorado.edu/firesafety/firealarmdetectsys.html](http://fm.colorado.edu/firesafety/firealarmdetectsys.html)

   Fire Suppression System Interruption/Outage: [http://fm.colorado.edu/firesafety/firesuppressionsystems.html](http://fm.colorado.edu/firesafety/firesuppressionsystems.html)

C. No hot work shall be conducted in any campus facility without a hot work permit. Any person or firm who conducts hot work without a permit shall be fined one thousand dollars ($1,000) for each occurrence and their non-permitted activities shall be stopped immediately until they obtain a hot work permit. Contractor shall be responsible for any damages caused as a result of improper hot work activities or the work stoppage.

E. Individuals or firms who obtain a permit shall fully read, understand and implement the requirements of the permit. Any person or firm who conducts hot work without the full implementation of the permit requirements shall be fined five hundred dollars ($500) the first time and one thousand dollars ($1,000) for subsequent occurrences. When the requirements of the hot work permit are not being implemented, the improper activities shall be stopped immediately until a hot work permit is obtained. Contractor shall be responsible for any damages caused as a
F. result of improper hot work activities or the work stoppage. Any contractor who is found to be in non-compliance a third time, will not be allowed to work on campus until further notice by Facilities Management.

E. The campus inspectors, project managers and fire marshal shall have the authority to stop improper or non-permitted hot work activities.

F. The Contractor shall notify the CU Fire Alarm Supervisor to deactivate all smoke alarms in the vicinity of the work prior to any demolition and construction work activity. Failure of the Contractor to comply with the smoke alarm deactivation requirement and cause a false alarm and arrival of the Boulder Fire Department shall be a $400 fine per occurrence.

1.07 PERMITS

A. The contractor must obtain a no fee building permit prior to starting work from Office Manager, Facilities Management at (303) 492-2904 in the Planning, Design and Construction Office, Research Laboratory No. 2, 1540 30th Street, Boulder, Colorado. Building permits are required on all projects except those work items specifically exempted by Section 105 of IBC

B. The contractor must post the permit(s) in a prominent location at the jobsite including all inspection reports. The contractor shall have an updated set of contract documents available at the jobsite for all inspections.

1.08 INSPECTIONS

A. The Contractor must schedule all required inspections 48 hours in advance by calling (303) 492-2922. CU or their designated inspectors will complete these inspections within 48 hours with the exception of weekends and state holidays.

B. The contractor is required to arrange for the following inspections:
   1. Required inspections: General. Reinforcing steel or structural framework of any part of any building of structure shall not be covered or concealed without first obtaining the approval of the building official.
   2. Lath or gypsum board inspection: To be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or before gypsum board joints and fasteners are taped and finished.
   3. Final inspection: To be made after finish grading and the building is completed and ready for occupancy.
   4. Special inspection: Special inspection may be required on special projects and special types of construction.
   5. Re-inspections: A re-inspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

C. The Contractor will be responsible for all cost related to re-inspections and will be billed at a rate of $50.00 per hour for CU re-inspections and at the testing agency bill-out rate for other re-inspections.

1.09 UNIVERSITY OF COLORADO SEXUAL HARASSMENT POLICY

A. Contractors should be aware of and review the University of Colorado at Boulder’s policies that prohibit discrimination and harassment on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation or veteran status. These policies are located on the web at: http://www.colorado.edu/odh/ Contractor personnel must adhere to these policies and
B. conduct themselves in a manner that does not discriminate or harass as a result of interacting with an around the University of Colorado faculty, staff and students and visitors.

1.10 FIRE ALARM INTERRUPTION

A. Contractor shall contact CU Fire Alarm Systems Supervisor at 303-492-0633 prior to all interruptions or shutdowns of fire alarm systems. Interruptions or shutdowns shall be scheduled three (3) working days in advance with CU Fire Alarm Systems Shop, CU Project Manager and building proctor. Contractor shall provide a fire watch as directed by CU Fire Alarm Systems Shop during interruption or shutdown.

C. The Contractor shall be responsible for preventing nuisance alarm due to activities at their work site. Common sources of nuisance alarms are:
   1. Smoke (soldering, welding, cooking, etc.)
   2. Grinding
   3. Dust (drilling, sweeping, canister vacuums, sand blasting, etc.)
   4. Water leaking (plumbing leaks, overflows)
   5. Water sprayed on or near detectors (pressure washing or cleaning with water)
   6. Popcorn or other food burning in microwaves
   7. Static electricity (covering or uncovering detectors)
   8. Changing filters on air handling units (dust)
   9. Steam (leaks, pressure pop-offs)
  10. Broken or frozen sprinkler heads
  11. Sprinkler drain valves turned by mistake
  12. Vandalism

Precautions to prevent nuisance alarms are:
   1. During construction projects, treat all buildings, except totally new construction, as though they were occupied buildings with live systems.
   2. Do not assume that all detectors are in plain sight. Contact University personnel for verification.
   3. Maintain dust control measures per UCB Standards:
      a. Maintaining barriers
      b. Covering air returns
      c. Asking CU personnel to cap or disable smoke detectors (Note any capping or disabling of fire safety devices is to be done ONLY by CU personnel, not contractors.)
      d. Avoiding recirculation of dust or smoke through the building air handling system.
   4. Follow campus hot work procedures. Refer to specification Section 01060, paragraph 1.06.
   3. Do not expose fire alarm devices to water or extreme temperatures.
   4. Contact Fire Systems Group for any actions that affect fire detection, alarm, and suppression systems.

1.11 STORMWATER MANAGEMENT PLAN (SWMP)

A. Stormwater Management Plan (SWMP): Prior to any construction activity disturbing one acre of land or more, an approved SWMP and a Stormwater Permit for Construction Activity application from the Colorado Department of Public Health and Environment (CDPHE) are required. The SWMP shall be prepared in accordance with the CDPHE requirements for “Contents of the Stormwater Management Plan” and the UDFCD’s Urban Storm Drainage Criteria Manual, Volume 3, “Best Management Practices” (UDFCD Drainage Criteria Manual). Stormwater quality management and erosion control measures are to be constructed and maintained in accordance with the SWMP and the UDFCD Drainage Criteria Manual.
1.12 ENVIRONMENTAL/STORMWATER POLLUTION PREVENTION

A. Contractors working on the UCB campus must comply with all applicable University, City, State and Federal environmental regulations and standards. The contractor shall keep material such as saw-cut slurry, drywall mud, grout and mortar, paint, sediment, and all other wastes and process water out of gutters, streets, storm drains and parking lots. The contractor shall also be responsible for proper disposal of all waste materials. Immediately notify 911, EH&S 303-492-6025 and project manager of accidental hazardous materials releases.

B. Contractors are required to locate drains or other water discharge points in the area of the project and provide measures to protect from illicit discharges, prior to construction activities. For assistance with determining where a drain leads to (storm vs. sanitary, especially floor drains), contact the Facilities Management service center at 303-492-5522.

C. The contractor shall be responsible for all costs associated with damages and clean-up as a result of contractor caused illicit discharges of process water or other materials into the storm water system. Also, in addition to any penalties or fines imposed by the City, State or Federal agencies, the contractor shall be fined one thousand dollars ($1,000) by UCB for the first time an incident occurs and may be put on probation from working on campus. The contractor will be prohibited from working on campus, until further notice by UCB, if they are found to be responsible for an illicit discharge a second time.

D. For the purpose of eliminating storm water pollution, the contractor shall implement effective Best Management Practices (BMPs). BMPs include general good housekeeping practices, appropriate scheduling of activities, operational practices, maintenance procedures and other measures to prevent the discharge of pollutants directly or indirectly to the storm water system. These BMPs shall be maintained for the duration of the contractor’s work. Contractors are required to visit website: http://www.bouldercolorado.gov/www/pace/government/index.html for examples of BMP’s that are applicable to project activities. The Contractor shall ensure that all applicable employees and sub-contractors who work on site are trained and comply with storm water pollution prevention methods and proper BMP’s.

E. In addition to the BMP’s the contractor will be required to sign an Environmental Responsibilities form for all projects. The contractor shall post a copy of this form on site, throughout the duration of the project, in a visible area for all workers to see. Also, the contractor will be required to fill out a Pre-Construction Water Quality Certification form indicating any/all potential discharges of process water, chemicals, de-watering, or other materials to sewer systems or landscape areas that are expected to result from project activities.

1.13 UTILITY LOCATES

Contractor MUST CALL 811 (or 1-800-922-1987) for utility locates BEFORE DIGGING on any project at the University of Colorado at Boulder. This includes even small projects such as, but not limited to, planting trees or shrubs, sidewalk removal/installation or fence post installation. Digging without calling can disrupt service to the campus or surrounding neighborhoods and potentially result in fines and repair costs.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:
   1. Specification system format.
   2. Grammar (syntax) description.

1.02 DESCRIPTION

A. These specifications have been derived from automated specification systems, and include minor deviations from format and traditional writing forms. Such deviations must be recognized as a normal result of this production technique, and no other meaning will be implied or permitted.

B. Imperative language of the technical sections is directed to the Contractor. The term "provide" used repeatedly in the text is defined to mean..."furnish and install, complete, in place and ready for operation and use unless specifically indicated otherwise."

C. Specifications are of abbreviated, simplified or streamlined type and include incomplete sentences. Omissions of work or phrases such as "the Contractor shall", "in conformity therewith," "shall be," "as noted on the Drawings", "A", "The", are intentional. Supply omitted words or phrases by inference in same manner as they are when "Note" occurs on Drawings. Supply words "on the Drawings" by inference when "as indicated" is used with sentences or phrases.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Remodel Work scheduling.
   2. Construction sequence scheduling.

B. Related Sections:
   1. Section 01500 - Temporary Facilities and Controls.

1.02 SYSTEM DESCRIPTION

A. An essential condition of this Contract shall be the scheduling and conduct of all phases of construction operations in such a manner that the Owner's operations and use of the existing buildings and campus shall be uninterrupted at all times, except for such limited interruption as is required and approved by the owner.

B. Contractor shall repair at his own expense all damage done to Owner's property, unknown utilities and adjoining public property as a result of Contractor's construction activities.

1.03 PROJECT/SITE CONDITIONS

A. Access and use of site:
   1. Contractor shall use the designated site access for construction offices and material storage in such a manner that access to existing buildings and campus remain accessible at all times for use.
   2. Confine operations to as limited a use of the existing building and campus as possible. A route of access to and from the work for employees shall be agreed upon and it shall be the Contractor's responsibility to see that the agreed route is maintained in order to prevent unwarranted or unnecessary traffic through the existing buildings or site.

B. Owner notice and approval:
   1. All arrangements and scheduling in connection with the work of this Contract shall be made with and subject to the approval of the Consultant and the Owner.
   2. All work under this Contract which will require interruption of service of the existing building shall be scheduled to suit the need and convenience of the Owner's operation, and arrangements shall be made with the Owner and the Architect at least eight (8) working days in advance of the start of such work.

PART 2 - PRODUCTS

Not Used
PART 3 - EXECUTION

3.01 REMODELING

A. Construction activities of all areas to be constructed in existing facilities shall be completely separated from the rest of the building by dust-proof enclosures erected by Contractor.

B. All surfaces in existing facilities not indicated to be remodeled, or removal of existing items by any Contractor, shall be repaired by the responsible Contractor to match existing adjoining similar surfaces.

3.02 CLEAN-UP

A. All areas within existing facilities, which are not within enclosed areas to be constructed used for access to work areas shall be completely cleaned of all debris and made "broom-clean" at the end of each day's work.

B. Dust, which permeates areas of existing facilities because of improperly constructed dust-proof barriers, shall be the responsibility of the Contractor. The Contractor shall employ the services of a professional cleaning company to clean any area outside of the designated construction dust barriers that are contaminated by Contractor’s operations. Completely clean all such areas to the satisfaction of the Owner at no additional cost.

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

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

1.02 SUMMARY:

A. Section Includes:
   1. General administrative requirements and procedures for Hazardous Communication Program.

B. Related Sections:
   1. Summary of Work: Section 01010.

1.03 WORK BY OWNER:

A. Asbestos:
   1. Pursuant to Colorado Department of Public Health and Environment, Air Quality Control Commission Regulation No. 8 Part B – Asbestos, Section V.H.1.d, the undersigned Architect/Engineer and Contractor, as duly authorized representatives for their firms, hereby certify that to the best of his/her knowledge, information and belief, the materials incorporated into the project, and as used during the construction process, are free of any type of asbestos containing materials (ACM). The undersigned acknowledge that not all asbestos building materials have or were ever completely banned (EPA/TSCA-1999).

   2. The Owner has completed an Environmental Site Assessment to identify asbestos containing materials and other immediate Health and Safety items. Do not begin work until Form Exhibit A (copy following the Supplementary General Conditions) has been executed. Where asbestos materials or other hazardous conditions are known to exist in locations affected by this project, remediation measures will be taken by the Owner under separate contract. The Contractor shall coordinate his sequence and schedule with that of the environmental remediation work.

   3. In the event that the Contractor encounters any material on the site which is reasonably believed hazardous, which has not been rendered harmless, the Contractor shall:
      a. Stop work immediately in affected areas.
      b. Report the condition in writing to the Department of Facilities Management Project Administrator.
      c. Report the condition in writing to the Architect.
      d. Resume work only under the provisions of this section.

1.04 SUBMITTALS:

A. Material Safety Data Sheets (MSDS):
   1. Copies of all material safety data sheets for all applicable products, including but not limited to; paint, adhesives, mastics, solvents, and finishes, etc., shall be retained on site by the Contractor for all applicable products used during the construction and/or remodeling work. Furnish copies of all MSDS’s to the Owner and Architect and include in the Project Record Document submittal.
1.05 QUALITY ASSURANCE:

A. Asbestos containing materials may exist within the general project area where such materials are not expected to be disturbed during the work. The Contractor shall review the Environmental Health and Safety Environmental Site Assessment Form at the project site and become familiar with known asbestos and hazardous containing materials in the work areas.

1.06 PROJECT/SITE CONDITIONS:

A. Hazard Communication Requirements:

1. All Contractors are responsible for compliance with mandatory federal rules and regulations concerning Hazard Communication, including, but not limited to those regulations contained in 29 CFR 1910.1200 Hazard Communication, 1910.146 Confined Space, 1910.147 Lock-out Tag-out, 1910.1101 Asbestos, and 1926.62 Lead. Contractor and all subcontractors working at sites under the control of the Owner shall make available to the Architect, upon request, copies of the Hazard Communication Program used by their firm. In addition to this requirement, all regulations related to Multi-employer workplaces shall be adhered to. These regulations are found in 29 CFR 1910.1200, (e) (2) (I) through (e) (4) specifically:

(e) (2) Multi-employer workplaces. Employers who produce, use, or store hazardous chemicals at workplace in such a way that employees of other employer(s) may be exposed (for example, employees of a construction contractor working on site) shall additionally ensure that the hazard communication programs developed and implemented under paragraph (e) include the following:

(e) (2) (i) The methods the employer will use to provide the other employer(s) with a copy of the material safety data sheet, or to make it available at a central location in the workplace, for each hazardous chemical the other employer(s)’ employees may be exposed to while working;

(e) (2) (ii) The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace’s normal operating conditions and in foreseeable emergencies; and,

(e) (2) (iii) The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace

(e) (3) The employer may rely on an existing hazard communication program to comply with these requirements, provided that it meets the criteria established in this paragraph (e).

(e) (4) The employer shall make the written hazard communication program available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director, in accordance with requirements of 29 CFR 1910.20 (e).

2. The referenced regulations were excerpted from 29 CFR 1910.1200. This excerpt shall not be relied upon for compliance with mandatory federal, state and local regulations. The Contractor shall comply with all such regulations and shall be solely liable for insuring that all requirements under applicable regulations are met.

PART 2 - PRODUCTS (Not applicable)
PART 3 - EXECUTION

3.01 EXAMINATION:

A. Asbestos and Hazardous Materials Discovery:
   1. The Contractor is cautioned to be alert to the possibility that his work may uncover asbestos-containing or hazardous materials. If suspected materials are found, the Contractor shall notify the Owner and stop all work in the area immediately. If the suspected materials prove to contain asbestos or hazardous materials, the Owner will arrange to have the materials abated in a timely manner.

3.02 HAZARDOUS MATERIALS/EQUIPMENT REMOVAL:

A. Definition:
   1. Removal of hazardous materials/equipment is extremely dangerous. Hazardous materials/equipment is defined to include, but not limited to the following:
      a. Fume hoods
      b. Hood exhaust duct work
      c. Exhaust fans
      d. Laboratory casework and equipment
      e. PCB ballast’s
      f. Mercury and Sodium Vapor Lights
      g. Adjacent material that could come in contact with workers or public.

B. Protection:
   1. Hazardous materials/equipment removal shall include the protection of personnel, material, environment and safe legal disposal of the equipment; and further includes the following:
      a. Notification of Project Administrator and appropriate Environmental Health and Safety Unit
      b. Proper protective clothing for personnel involved in the removal.
      c. Appropriate emergency and first aid facilities.
      d. Removal procedures shall be accomplished during minimal occupancy of the remainder of the building on the weekends or at night.

C. Disposal:
   1. All equipment related to the use, storage or processing of hazardous materials/equipment shall be removed and properly disposed of under the direct, full-time supervision of a qualified Laboratory Specialist fully conversant with the chemistry and properties of the material/equipment involved. Certification is required. Contractors are responsible for the removal of all hazardous materials/equipment and chemicals from the work site as well as proper disposal of all hazardous waste generated by their project.

   2. Hazardous waste disposal must include prior notification to the Department of Environmental Health and Safety in order to verify that the appropriate procedures and documentation are used. Copies of all paper work for shipping and disposing of these materials (hazardous waste manifests, land disposal restrictions, etc.) will be provided by the Contractor to the Department of Environmental Health & Safety (303) 492-6025. Where appropriate, the Main Campus EPF ID COD007431505 will be used for these shipments.

   3. Hazardous chemicals, waste, and other pollutants may not be discharged to the sanitary or storm sewer systems at anytime. Releases to the environment must be reported to CUPD/EH&S immediately.

END OF SECTION
PART 1 - GENERAL

1.01 REQUIREMENTS

A. The types and minimum requirements for project meetings are included but are not necessarily limited to the following categories:

Pre-construction meeting
Progress and Coordination meetings
Specially called meetings

B. The pre-construction meeting will be scheduled within fifteen days after date of Notice to Proceed, at a central site location designated by the Owner and convenient for all parties.

1. Attendance:
   a. Owner’s Representative
   b. Consultant and his sub-consultants, as applicable
   c. Contractor’s Superintendent
   d. Major Subcontractor(s)
   e. Others as appropriate

2. Suggested Agenda:
   a. Distribution and discussion of:
      List of major subcontractors and suppliers
      Projected construction schedules
      Critical work sequencing
      Major equipment deliveries and priorities
      Project Coordination
      Designation of responsible personnel
   b. Procedures and processing of:
      Field decisions
      Proposal requests
      Submittals
      Change Orders
      Applications for Payment
   c. Adequacy of Distribution of Contract Documents
   d. Procedure for Maintaining Record Documents
   e. Inspections
   f. Stormwater Management Plan (SWMP)

C. The Architect/Engineer will: Record the minutes; including significant proceedings and decisions.

D. The Contractor shall schedule and administer subcontractor and vendor pre-construction meetings throughout progress of the work. He will:
   1. Prepare agenda for meetings.
   2. Distribute written notice of each meeting four days in advance of meeting date.
   3. Make physical arrangements for meetings.
   4. Preside at meeting.
   5. Record the minutes; including significant proceedings and decisions.
   6. Representatives of Contractors, Subcontractors, and Suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
7. Use of Premises:
   Office, work, staging and storage areas
   Owner's requirements

8. Temporary construction Facilities, Utilities, Controls and Construction Aids

9. Safety, First-aid, Security and Housekeeping Procedures

10. Administrative Procedures and Documents as Required by Owner

### 1.02 PROGRESS AND COORDINATION MEETING

The Contractor will schedule and administer job progress and coordination meeting at the site.

**A. Attendance:**

1. Owner as needed
2. Consultant and his sub-consultants as needed
3. Subcontractor as appropriate to the agenda
4. Suppliers as appropriate to the agenda
5. Others

**B. Suggested Agenda:**

1. Review of work progress since previous meeting.
2. Field observations, problems and conflicts.
3. Problems which impede Construction Schedule.
4. Review of off-site fabrication and delivery schedules.
5. Corrective measures and procedures to regain projected schedule.
6. Revisions to Construction Schedule.
7. Coordination of schedules.
8. Progress and schedule during succeeding work period.
9. Review submittal schedules and expedite as required.
11. Pending changes and substitutions.
12. Review proposed changes for:
   a. Effect on Construction Schedule and on completion date.
   b. Effect on other contracts of the Project.

**C.** The Architect/Engineer shall record and distribute the minutes of all progress meetings throughout the construction period and shall visit the site a minimum of once every two weeks. The Architect/Engineer shall average one visit per week during construction.

The structural engineer shall visit the site immediately prior to every major structural concrete slab pour; every major foundation wall pour; at least twice for each major segment of work [i.e., caissons, columns, steel roof joists, etc].

END OF SECTION
PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Submit shop drawings, product data and samples as required by various sections of the specifications.

1.02 QUALITY ASSURANCE

A. Shop Drawings:
   1. Drawings shall be presented in a clear and thorough manner.
   2. Details shall be identified by reference to sheet, detail, schedule, or room numbers shown on drawings.

B. Product Data:
   1. Preparation:
      a. Clearly mark each copy to identify pertinent products or models.
      b. Show performance characteristics and capabilities.
      c. Show dimensions and clearances required.
      d. Show wiring or piping diagrams and controls.
   2. Manufacturer's standard schematic drawings and diagrams.
      a. Modify drawings and diagrams to delete information that is not applicable to the work.
      b. Supplement Standard information to provide information specifically applicable to the work.

C. Samples:
   1. Office samples shall be of sufficient size and quantity to clearly illustrate:
      a. Functional characteristics of the product with integrally related parts and attachment devices.
      b. Full range of color, texture and pattern

D. Mock-ups:
   1. Provide complete mock-up of exterior materials to be incorporated into the work.
      a. Mock-up shall include a sample of all materials used in exterior construction, whether specified elsewhere or not in these documents, including but not limited to, masonry, stone, window systems, precast concrete, roof systems, flashing, sealants, masonry paving, paint and other readily visible materials.
      b. Secure Owner approval of mock-ups prior to ordering and placement of materials. Modify mock-ups as directed by the Architect or Owner until acceptable.
      c. Confirm exact mock-up(s) required by Owner prior to fabrication of mock-up(s).
   2. Remove mock-up at the conclusion of the project or when directed by the Architect.
      a. Restore or finish site to finish condition indicated on the Drawings.

E. Responsibilities of the Contractor:
   1. Review shop drawings, product data, samples and project record drawings for specification performance prior to submission.
2. Determine and Verify:
   a. Field measurements
   b. Field construction criteria
   c. Catalog numbers and similar data
   d. Conformance with specifications

3. Coordinate each submittal with requirements of the work and of the Contract Documents.

4. Notify the Consultant in writing, at the time of submission, of any deviations in the submittals for requirements of the Contract Documents.

5. Begin no fabrication or work that requires submittals until return of submittals with Consultant's acceptance.

6. Contractor's responsibility for deviations in submittals from requirements of Contract Documents is not relieved by Consultant's review of submittals.

7. Contractor shall stamp, sign or initial, and date each submittal to show compliance with the Contract Documents prior to submittal to the Consultant.

1.03 SUBMITTALS

A. Make submittals promptly in accordance with approved schedule and in such sequence as to cause no delay in the work.

B. Number of Submittals Required:
   1. Shop Drawings: PDF email submittals, cover page, submittal #; and division section # - CSI format
   2. Product Data: PDF email submittals, cover page, submittal #; and division section # - CSI format
   3. Samples: Submit the number stated in each specification section.

C. Submittals shall contain:
   1. Date of the submission and dates of any previous submissions.
   2. Project title and number.
   4. Names of:
      a. Contractor and Subcontractor(s), if applicable.
      b. Supplier
      c. Manufacturer
   5. Identification of product with the specification section number.
   6. Field dimensions, clearly identified as such.
   7. Relation to adjacent or critical features of the work or materials.
   8. Applicable standards, such as ASTM or Federal specification numbers.
   10. Identification of revisions on resubmittals.
   11. An 8"x3" blank space in lower right-hand corner for review stamps.

D. Resubmission Requirements:
   1. Make any corrections or changes in the submittals required by the Consultant and resubmit until accepted.

   2. Shop drawings and product data:
      a. Revise initial drawings or data and resubmit as specified for initial submittal.
      b. Indicate any changes that have been made, other than those requested by the Consultant.
3. Samples: Submit new samples as required for initial submittal.

E. Distribution:
1. Distribute reproductions of approved shop drawings and copies of product data to affected subcontractors and retain one copy for use at the job-site.
2. Distribute approved samples as directed.

F. Consultant's Duties:
1. Review submittals with reasonable promptness and in accordance with schedule.
2. Review of separate item does not constitute review of an assembly in which item functions.
3. Affix stamp and initials or signature, and indicate requirements for resubmittal or acceptance of submittal.
4. Return submittals to the Contractor for distribution or for resubmission.

G. Schedule of Values and pay applications:
1. Submit typed schedule on State Form SC7.2; Contractor's standard form or media-driven printout will be considered on request.
2. Format: Table of Contents of this Project Manual.
3. Include in each line item a directly proportional amount of Contractor's overhead and profit.

H. Schedule of Submittals: The Contractor shall submit the submittals required by the specifications. The Contractor shall develop a submittal schedule that confirms the submittals and the time frame for review by the consultants.

I. Construction Schedule:
1. The Contractor shall submit a critical-path method (CPM) construction schedule prior to start of construction activities. The CPM schedule shall include notice to proceed, submittal activities, construction activities, change order work (when applicable), close-out, testing, demonstration, and acceptance. The CPM shall correlate specifically to the schedule of values line items and be cost loaded.

Float, slack time, or contingency within the schedule (i.e., the difference in time between the project's early completion date and the required contract completion date), and total float within the overall schedule, is not for the exclusive use of either the principal representative or the Contractor, but is jointly owned by both and is a resource available to and shared by both parties as needed to meet contract milestones and the contract completion date.

The Contractor will be required to submit an as-built progress CPM schedule with each progress billing. This CPM schedule will be the basis for making progress payments. The level of detail and quantity of work activities in the CPM schedule should be negotiated with the principal representative prior to starting construction.

J. Progress Photos
1. The Contractor shall submit up to 12 - 3x4 inch progress photos with each progress payment. The photos should demonstrate the work in place and be dated with a short description of the photographed item.
K. Coordination Drawings:
   1. The Contractor shall submit coordination drawings with all mechanical, electrical, fire protection, and building monitoring systems prior to the Consultant review of any shop drawings or submittals for work in those trades. Approval of required shops and submittals must be obtained prior to starting work, and must be obtained prior to approval of pay applications of the work. The drawings shall be created to include all trades on a particular level of the building on one drawing. Identify conflicts between the systems or between the systems and architectural elements such as ceiling heights, ceiling types, or walls. Conduit routing for electrical, mechanical, energy management system, and security trades shall be included. Identify potential solutions to the conflicts for the Consultant and Owner to review during the submittal process. Revise the coordination drawings to show any comments made during the submittal review process, and reissue for use by all affected trades, Owner and Consultant.
   2. The Coordination drawings shall include sectional coordination documents. Identify elevations of systems A.F.F. (above finish floor) and component dimensions. Show elevations whenever component changes height.

L. Daily Reports
   1. The contractor shall submit daily reports, due by 5 p.m. the following day. The report should include weather, equipment, manpower count, subcontractors on site, short description of work for that day, inspections, visitors, items that may affect progress or quality of project.

M. Request for Information (RFI):
   1. The Contractor will be responsible for submitting RFIs on AIA form G716 or similar. The RFI should identify in writing any unclear, inconsistent, or conflicting item in the documents that could not be answered by thorough review by the Contractor or subcontractors. The RFI should include a description of the item and a proposed solution. The RFI should indicate schedule or cost impact, if any. Contractor shall be required to submit cost or schedule impact within seven days of receipt of the RFI response. Each RFI shall be numbered in sequence.

N. Weekly Logs:
   1. The Contractor shall provide an updated RFI, change request, and submittal logs at weekly construction meetings. Contractor shall provide a 2-week detailed construction schedule at the weekly construction meeting.

PART 2 - MATERIALS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION
PART 1 - GENERAL

1.01 SUPPLEMENTAL TESTING

If required, the following testing shall be performed at the expense of the contractor installing the material being tested:

A. Material Substitution: Any tests of basic material or fabrication equipment offered as a substitute for specified item on which a test may be required in order to prove its compliance with the specifications.

B. Mechanical/Electrical: Tests on mechanical and electrical systems required to insure their proper installation and operation.

C. Any test that fails shall be paid for by the installing contractor subject to the following conditions:
   1. Quantity and nature of tests will be determined by the Consultant.
   2. All test shall be done in the presence of the Owner or his representative.
   3. Proof of noncompliance will make the installing contractor liable for any corrective action which the Owner feels is prudent including complete removal and replacement of defective material.

Nothing contained herein is intended to imply that the installing contractor does not have the right to have tests performed on any material at any time for his own information and job control so long as the Consultant or Owner does not assume responsibility for costs or for giving them consideration when appraising quality of materials.

D. The Consultant shall determine the type and number of tests to be performed on the project.

1.02 TEST REPORTS

Reports of all tests made by testing laboratories shall distributed by the testing laboratory as follows:
1 copy - Contractor
1 copy - Applicable supplier or subcontractor
1 copy - Owner
1 copy - Consultant
Other copies - as directed

1.03 QUALITY CONTROL SYSTEM

A. General: The contractor shall establish a quality control system to perform sufficient inspection and tests of all items of work, including that of all subcontractors, to ensure conformance to the Contract Documents for materials, workmanship, construction, finish, functional performance and identification. This control shall be established for all construction except where the Contract Documents provide for specific compliance tests by testing laboratories or Consultants employed by the Owner.

The quality control system is the means by which the Contractor assures that construction complies with the requirements of the Contract Documents. Controls shall be adequate to cover all construction operations and should be keyed to the proposed construction schedule.
B. The Contractor shall designate a quality control representative on staff to review the work to insure compliance with the contract documents by weekly jobsite visits for observation. The designated employee shall not be involved in the performance of the work. The quality control representative shall review the work and make necessary corrections to bring the work into compliance prior to scheduling the Architect for the final punchlist review.

C. Records: The Contractor shall maintain correct records on an appropriate form for all inspections and tests performed, instruction received from the Owner and actions taken as a result of those instructions. These records shall include evidence that the required inspections or tests have been performed (including type and number of inspections or tests, nature of defects, causes for rejection, etc.) proposed or directed remedial action, and corrective action taken. The Contractor shall document inspections and tests as required by each Section of the Specifications.

1.04 INDEPENDENT TESTING AGENCY SERVICES

A. The Owner will employ and pay for the services of an independent Testing Agency to perform the Inspections, special inspections, tests and other services when required by sections of the specification. Services shall be performed in accordance with requirements of governing authorities and with specified standards.

1. Contractor shall cooperate with Testing Agency personnel and shall furnish tools, sample of materials, design mixes, equipment and assistance as requested.

2. Contractor shall provide and maintain, for the sole use of the Testing Agency, adequate facilities for the safe storage and proper curing of concrete testing cylinders on the project site for the first 24 hours after casting as required by ASTM C 31, Method of Making and Curing Concrete Test Specimens in the field.

3. Contractor shall notify Testing Agency sufficiently in advance of operations to allow for completion of initial tests and proper assignment of inspection personnel.

4. Contractor shall notify the testing agency sufficiently in advance of cancellation of required testing operations. The Contractor shall assume responsibility for costs incurred due to the failure to provide such notice.

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.02 DESCRIPTION OF REQUIREMENTS

A. This section of the General Requirements outlines the basic requirements for temporary services, utilities, and facilities which will indirectly enable adequate construction progress and processes, and will accommodate other necessary activities at the project site except as otherwise indicated, the costs of providing and using temporary services are included in the Contract Sum.

1.03 QUALITY ASSURANCE

A. Comply with governing regulations and utility company regulations and recommendations for the construction of temporary facilities, including but not necessarily limited to, code compliance, permits, inspections, testing, and health and safety compliance.

1.04 SITE CONDITIONS

A. Provide Temporary facilities and services at the time first needed at the site and maintain, expand, and modify the facilities as needed throughout the construction period and do not remove until no longer needed.

PART 2 - EXECUTION

2.01 GENERAL

A. Use qualified tradesmen for the installation of temporary facilities. Locate facilities where they will serve the total project construction work adequately and result in minimum interference with performance of the work. Relocate, modify, and extend facilities as required during the course of the work to properly accommodate the entire work of the project.

2.02 TEMPORARY FACILITIES

A. Temporary Water: Connect to existing water source as designated by the Owner for construction operations.

B. Temporary Telephone: Provide, maintain and pay for telephone service to field office at time of project mobilization. If a mobile phone is designated as the field office phone then it shall be a local number.

C. Sanitary Facilities: Comply with governing regulations, including safety and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install sanitary facilities in available locations which will best serve the needs of personnel at the project site. Toilet rooms in existing buildings or in new construction may not be used without written approval of the Owner.
D. Temporary Heat and Ventilation: Provide such OSHA approved heat and fuel, heating units, equipment as necessary to provide the required environmental conditions and to protect the work from damage due to cold. Maintain equipment in a clean, safe condition.

E. Fire Extinguisher:
   1. Except as otherwise indicated or required, comply with the applicable recommendations of NFPA No. 10 “Portable Fire Extinguisher” for each area of each construction activity whenever combustible materials, flammable liquids, and similar exposures to possible fires are present.
   2. Locate extinguisher where most convenient and effective for the intended purposes. Store combustible materials in recognized fire-safe locations and containers.

F. Protection
   1. Barricades, Warning Signs, and lights: Comply with recognized standards and code requirements for the erection of substantial and structurally adequate barricades wherever needed to prevent accidents and losses. Paint with appropriate colors, graphics and warning signs to inform personnel at the site and the general public where exposure exists of the hazard being protected. Provide lighting where appropriate and needed for the recognition of the facility, including flashing red lights where appropriate.

G. Temporary Enclosure: Wherever required, provide temporary enclosure of materials, equipment, work in progress, and completed portions of work, so as to afford protection for both the work and employees.

H. Miscellaneous Facilities:
   1. Provide ladders, ramps, and temporary stairs for access to all levels of the construction for general access by all trades. Individual contractors and subcontractors shall furnish their own stepladders, scaffolds, staging, work platforms, and other facilities for use of their workmen and as necessary for safety of all personnel.

I. Field Office:
   1. The Contractor shall provide and maintain a suitable temporary field office for his own use. Offices and all other temporary structures shall be removed from the site upon completion of the work.
   2. Temporary structures or storage used for storage and offices for contractors shall be located on the site in an orderly manner as determined by the Owner.

2.03 OPERATIONS AND TERMINATIONS

A. Supervision: Enforce strict discipline in the use of temporary facilities at the project site. Limit availability of facilities to essential and intended uses, so as to minimize waste and possibility of abuses and the resulting unsanitary and hazardous or dangerous conditions.
B. Maintenance: Operate and maintain temporary facilities in good operating condition through the time of use and until removal is authorized. Protect from damage by freezing temperatures and similar elements at the site.

C. Termination and removal: At the time the need has ended for each temporary facility, or when it has been replaced by authorized use of a permanent facility, or at the time of Substantial completion, promptly remove the facility unless requested by the Consultant to be retained for a longer period of time. Complete or restore permanent work which may have been delayed or otherwise affected by the temporary facility. Replace work which cannot be satisfactorily restored. Except as otherwise indicated, the materials and equipment of temporary facilities remain the property of the contractors.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Products.
   2. Transportation and Handling.
   4. Manufacturer's Instructions.
   5. Product Options.
   6. Products List.
   7. Substitutions.

B. Related Sections:
   1. Section 01400 - Quality Control.
   2. Section 01730 - Operation and Maintenance Data.

1.02 QUALITY ASSURANCE

A. Conform to applicable specifications and standards.

B. Comply with size, make, type and quality specified, or as specifically approved in writing by the Consultant.

C. Manufactured and Fabricated Products:
   1. Two or more items of the same kind shall be identical, by the same manufacturer.
   2. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.

1.03 TRANSPORTATION AND HANDLING

A. Arrange deliveries of products in accord with construction schedules, coordinate to avoid conflict with work and conditions at the site.

B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.04 STORAGE AND PROTECTION

A. Store products in accordance with manufacturer' instruction, with seals and labels intact and legible.

B. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.

1.05 MANUFACTURER'S INSTRUCTIONS

A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including one copy to the Consultant and one copy to the Contractor.
B. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.06 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards.

B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not specifically named.

C. Consultant will review requests for substitutions with reasonable promptness, and notify, by Addendum, of the decision to accept or reject the requested substitution.

1.07 PRODUCT LIST

A. Within 15 days after signing of agreement, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

1.08 SUBSTITUTIONS

A. Will only be considered prior to bid or in the event that Equipment is not available.

1.09 SYSTEMS DEMONSTRATION

A. Prior to final inspection, demonstrate operation of each system to Consultant and Owner.

B. Instruct Owner's personnel in operation, adjustment, and maintenance of equipment and systems, using the operation and maintenance data as the basis of instruction.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION
PART 1 - GENERAL

1.01 SUBSTANTIAL COMPLETION AND FINAL INSPECTION

A. The Contractor shall comply with procedures stated in the General Conditions of the Contract for Notice of Completion, Final Inspection, Notice of Substantial Completion and Notice of Acceptance.

B. Should the Architect/Engineer or the Principle Representative determine that the work is not substantially complete, or the punch list items exceed 25, he will immediately notify the Contractor, in writing, stating reasons. After Contractor completes work, he shall resubmit certification and request for final inspection. The Contractor will be responsible for all costs beyond two Architect/Engineer walk-throughs.

C. Owner may occupy designated portions of the Project under provisions stated in the General Conditions of the Contract.

1.02 CLOSE-OUT FORMS

The Architect/Engineer will complete the Notice of Approval of Beneficial Occupancy, Closing-out Checklist and Contract Close-out forms and forward them to the Contractor. Comply with procedures stated in General Conditions of the Contract.

1.03 FINAL SETTLEMENT AND PAYMENT

A. Contractor shall comply with procedures stated in the General Conditions of the Contract before final settlement and payment are made.

B. The Contractor shall also submit the following prior to the final application for payment:
   1. Contractor’s Affidavit of Payment of Debit and Claims: AIA G706.
   2. Contractor’s Affidavit of Release of Liens (claims): AIA G706A, with:
      a. Consent of Surety to final payment: AIA G707
      b. Contractor’s release of waivers of claims.
      c. Separate release of waivers of claims for subcontractors, suppliers and others with claim rights, against property of owner, together with list of those parties.

1.04 GUARANTEE INSPECTION

A. The Contractor shall comply with procedures stated in the General Conditions of the Contract for Guarantee Inspections after completion of the work.

1.05 WARRANTIES AND SPECIAL GUARANTEES

The Contractor shall comply with procedures and criteria outlined in the General Conditions of the Contract for all warranties and special guarantees of the work.

1.06 OPERATING AND MAINTENANCE DATA

A. Refer to Section 01730 - Operating and Maintenance.

B. Mechanical - By Mechanical Contractor: See Division 15.
C. Electrical - By Electrical Contractor: See Division 16.

1.07 DEMONSTRATIONS

A. Refer to Section 01730 - Operating and Maintenance

B. Mechanical - By Mechanical Contractor: See Division 15

C. Electrical - By Electrical Contractor: See Division 16.

1.08 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, and maintenance materials in quantities specified in each Section, in addition to that used for construction of work. Coordinate with Owner, deliver to Project site and obtain receipt prior to final payment.

B. At the completion of the project, all loose keys for hose bibs; adjustment keys and wrenches for door closers and panic hardware; and keys for electric switches, electrical panels, etc., shall be accounted for by the Contractor and turned over to the Owner.

END OF SECTION
PART 1 - GENERAL

1.01 CLEANING

A. Clean-up During Construction: Each contractor shall keep the building and premises free from all surplus material, waste material, dirt and rubbish caused by his employees or work, and at the completion of his work he shall remove all such surplus material, waste material, dirt and rubbish, as well as his tools, equipment and scaffolding, and shall leave his work clean and spotless, unless more exact requirements are specified. In case of dispute, the owner may remove all such items and charge the cost of such removal to the contractor.

Each sub-contractor shall perform his clean-up daily and shall transport his rubbish to an on-site location designated by the Contractor who will arrange for its removal.

B. Cleaners: With the exception of clean-up of the site and cleaning specifically assigned to Contractors under various sections of the specifications, all final clean-up of exterior and interior of the building shall be done by professional cleaners.

C. Final Clean-up:
   1. Exterior: In addition to items specified below, any new surfaces on exterior, concrete, metal, etc., shall be carefully and thoroughly cleaned.
   2. Glass: Both sides of all glass in work areas shall be carefully and thoroughly cleaned by professional window cleaners and left absolutely clean and free from paint, grease, dirt, etc.
   3. Hardware: Clean and polish all hardware and leave clean and free from paint, grease, dirt, etc.
   4. Plumbing: Clean and polish all plumbing fixtures, fittings, and exposed plated piping. Leave clean and free from paint, grease, dirt, etc. Remove all labels.
   5. Electrical: Clean and polish all electric fixtures, including glassware, switch plates, etc. and leave clean and free from paint, grease, dirt, etc.
   6. Equipment: Carefully and thoroughly clean all items of equipment, mechanical, electrical, cabinets, ductwork, etc.
   7. Floors: Thoroughly clean all floors. Vacuum and clean carpeting. Shampooing of pre-existing carpet is required once project is complete. Contractor is responsible for this.
      a. Contractors are responsible for cleaning (stripping floors if necessary) then applying the required two coats of sealer and three coats of finish before releasing the building for occupancy. Facilities Management will provide a contact person for help concerning campus standards free of charge. Or Custodial floor care services may be sub-contracted out through Facilities Management's work order system.
      b. Facilities Management Approved Sealers and Finishes for Vinyl Tile Flooring:

CU requires floor care products to be from the same product line. (Different brands may interact disastrously).

All of these products may be ordered through Construction Stores, but these products not stocked at Stores, please place orders at least two weeks in advance.
Campus safety standards require at least TWO (2) coats of Sealer be applied to a cleaned floor, and at least THREE (3) coats of Finish must be applied on top of the sealer.

c. Floor Cleaning Procedures:
1. Sweep floor clean of debris
2. Cord off area if necessary
3. Put up Caution signs
4. Mix Stripper or Cleaning solution according to label
5. Apply solution to floor
6. Start setting up equipment
7. Place RED abrasive pad on buffer (buffer less than 300 rpms)
8. Begin stripping or cleaning floor working with buffer moving it side to side across the floor.
9. Use HEPA filtered water vacuum to begin to suck up slurry*
   *use of HEPA filtered water vacuum is required on existing floor tile which contains asbestos.
10. Apply additional coats of water and re-vacuum up floor
11. Mop floor with clean water, change rinse water often
12. Mop floor a second time
13. Mop floor to dry completely
14. Clean up equipment
15. Wash red pad with clean water.

d. Sealing Procedures:
1. Using a new mop head or clean wax mop and clean bucket, apply first coat of approved sealer to floor
2. Allow floor to dry completely (at least 20 minutes)
3. Apply second coat of sealer
4. Allow floor to dry

e. Finishing (Waxing) Procedures:
1. Using a clean wax mop and bucket apply first coat of approved finish (wax)
2. Allow floor to dry completely (at least 20 minutes)
3. Apply second coat of finish (wax)
4. Allow floor to dry completely (at least 20 minutes)
5. Apply third coat of finish (wax)
6. Allow floor to dry completely (at least 30 minutes)
7. Wash mop and bucket with clean water
8. If floor is dry - remove caution signs and open area up
f. Burnishing Procedures:
The next working day
1. Sweep floor clean of debris
2. Spot mop floor to remove spots and dirt
3. Set up High Speed Burnisher to make for a safe environment
4. Start Burnishing. Walk forward in a straight line
5. At end of row, turn around and start forward again
6. Repeat steps 5 & 6 until finished
7. Clean up equipment and pad.

E. Completion: The entire work inside and out, and the entire premises shall be in first-class, clean condition upon completion before being accepted by the Owner.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. This section describes the definitions, recording and maintenance requirements and the submittal requirements for record documents.

1.02 DEFINITIONS

A. The Project Record Documents are intended to indicate all changes and deviations from the original contract documents and permanently record the “as-built” condition of material, equipment and structure. The project record documents shall include the contract drawings, project manual, addenda, change orders, modifications and clarifications, field directives, approved shop drawings, approved product data, manufacturer’s certificates and project test results.

1.03 SUBMITTALS

A. Submit the project record documents in conformance with Section 01700 and prior to the final applications for payment. The final application for payment will not be approved prior to the submittal of record documents.

1.04 QUALITY ASSURANCE

A. The project record documents shall be updated at a minimum on a weekly basis and shall be readily available for inspection by the owner and consultants. Maintain a separate set of complete documents for exclusive use of record documents and protect the documents from damage in a clean, dry location. Note: Progress applications for payment will not be approved if record documents are not current.

B. The record documents shall contain a clear, legible record of all detail and dimensional changes and locate all concealed work including, but not limited to:
   1. Interior and Exterior Utilities
   2. Valves
   3. Dampers
   4. Controls
   5. Junction Boxes
   6. Clean-outs
   7. Access Doors

C. The project manual (specifications) shall indicate all manufacturers’ products complete with catalogue number and trade name of products installed. All changes and corrections to the project manual shall be clearly indicated.

END OF SECTION
PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Compile product data and related information appropriate for the University of Colorado's maintenance and operation of products furnished.

B. Prepare operating and maintenance data as specified in this section and as referenced in other pertinent sections of specifications.

C. Instruct the University of Colorado, Facilities Management personnel in the maintenance of PRODUCTS and in the operation of equipment and systems.

1.02 QUALITY ASSURANCE

A. Preparation of data shall be done by personnel:
   1. Trained and experienced in maintenance and operation of the described products.
   2. Completely familiar with requirements of this section.
   3. Skilled as a technical writer to the extent required to communicate essential data.
   4. Skilled as a draftsman competent to prepare required drawings.

1.03 SUBMITTALS

A. Prepare data in the form of an instructional manual for use by the University of Colorado, Facilities Management personnel. Quantities are listed in Part 1.07.

B. Format:
   1. Submit electronically in Portable Document Format (PDF) format as one document, OCR (Optical Character Recognition) searchable, bookmarked according to the Construction Specifications Institute (CSI) standards.
   2. Title shall be "OPERATING AND MAINTENANCE INSTRUCTIONS", and shall include:
      a. Name of project and date of completion (month and year).
      b. Project number.
      c. Identify of general subject matter covered in the manual (e.g., Architectural, Mechanical, Electrical and/or Civil).

1.04 CONTENT OF MANUAL

A. An electronically-written table of contents shall be provided for each volume, arranged according to CSI standards.
   Include the following:
   1. Name of responsible installing principal contractor, address, and telephone number.
   2. A list of each product being included, indexed to the content of the volume.
   3. List with each product, the name, address, and telephone number of:
      a. Maintenance contractor, as appropriate.
      b. Identity of the area of responsibility of each.
   4. Identify each product by product name and other identifying symbols.
B. Product Data:
1. Local source of supply for parts and replacement.
2. Include only those sheets that are pertinent to the specific product, with the following information.
   a. Clearly identify the specific product or part installed.
   b. Clearly identify the data applicable to the installation.
   c. Delete references to inapplicable information.

C. Drawings:
1. Supplement product data with drawings as necessary to clearly illustrate:
   a. Relations of component parts of equipment and systems.
   b. Control and flow diagrams.
2. Coordinate drawings with information in project record drawings to ensure correct illustration of completed installation.
3. Do not use project record drawings as maintenance drawings.

D. Provide written text, as required, to supplement product data for the particular installation:
1. Organize in a consistent format under separate headings for different procedures.
2. Provide a logical sequence of instructions for each procedure.

E. Provide a copy of each warranty, bond, and service contract issued. Provide information sheets for the University of Colorado, Facilities Management's personnel and give:
1. Proper procedures in the event of failure.
2. Instances that might affect the validity of warranties or bonds.

1.05 MANUALS FOR ARCHITECTURAL MATERIAL AND FINISHES

A. Submit copies (per schedule shown in paragraph 1.07) of complete manual in final form.

B. Content for architectural products include applied materials and finishes.
1. Manufacturer's data, giving full information on products.
   a. Catalog number, size, and composition.
   b. Color and texture designations.
   c. Information required for reordering special manufactured products.
2. Instructions for care and maintenance:
   a. Manufacturer's recommendation for types of cleaning agents and methods.
   b. Cautions against cleaning agents and methods that are detrimental to the product.
   c. Recommended schedule for cleaning and maintenance.

C. Content for moisture-protection and weather-exposed products:
1. Provide manufacturer's data, giving fully information on products.
   a. Applicable standards
   b. Chemical composition
   c. Details of installation
2. Provide instructions for inspection, maintenance, and repair.
1.06 MANUAL FOR NON-ARCHITECTURAL EQUIPMENT AND SYSTEMS

A. Submit copies (per schedule) of complete manual in final form.

B. Content for each unit of equipment and system, as appropriate shall contain:
   1. Description of unit and component parts (Consultant-approved submittals).
      a. Function, normal operating characteristics, and limiting conditions.
      b. Performance curves, engineering data, and tests.
      c. Complete nomenclature and Commercial number of all replaceable parts.
   2. Operating Procedures:
      a. Start-up, break-in, routine, and normal operating instructions.
      b. Regulation, control, stopping, shutdown, and emergency instructions.
      c. Summer and winter operating instructions.
      d. Special operating instructions.
   3. Maintenance Procedures:
      a. Routine operations.
      c. Disassembly, repair, and reassembly.
      d. Alignment, adjustment, and checking.
   4. Servicing and Lubrication Schedule, including a list of lubricants required.
   5. Manufacturer's operating and maintenance instructions.
   6. Description of sequence of operation by control manufacturer.
   7. Original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance and replacement.
      a. Predicted life of parts subject to wear.
      b. Items recommended to be stocked as spare parts.
   8. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.

C. Content for each electric and electronic system, as appropriate, shall contain:
   1. Description of system and component parts:
      a. Function, normal operating characteristics, and limiting conditions.
      b. Performance curves, engineering data, and tests.
      c. Complete nomenclature and Commercial number of replaceable parts.
   2. Operating Procedures:
      a. Routing and normal operating instructions.
      b. Sequences required.
      c. Special operating instructions.
   3. Maintenance Procedures:
      a. Routing operations.
      c. Disassembly, repair, and reassembly.
      d. Adjustment and checking.
      e. Manufacturer's printed operating and maintenance instructions.
      f. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.

D. Prepare and include additional data when the need for such data becomes apparent during instruction of the University of Colorado, Facilities Management's personnel.
1.07 OPERATION & MAINTENANCE MANUAL

A. Operations and Maintenance Manuals – all disciplines – submit electronically in Portable Document Format (PDF) format as one document, OCR (Optical Character Recognition) searchable, bookmarked according to the Construction Specifications Institute (CSI) standards.

1.08 SUBMITTAL SCHEDULE

A. Submit one electronic copy to the Consultants and one to the University of draft of proposed formats and outlines of contents upon completion of the submittal process. The Consultants and the University staff will review the draft and will submit comments through the consultants.

B. Submit electronic copies of complete manual(s) in final form 15 days prior to final inspection or acceptance. Comments will be submitted after final inspection.

C. Submit specified number of CDs or DVDs of approved data in final form prior to acceptance.

1.09 INSTRUCTION OF UNIVERSITY OF COLORADO, FACILITIES MANAGEMENT PERSONNEL

A. Fully instruct the University of Colorado, Facilities Management personnel's designated operating and maintenance personnel in the operation, adjustment, and maintenance of all products, equipment, and systems as required elsewhere in the specification.

B. Operating and Maintenance manual may be required as the basis of instruction.

PART 2 - MATERIAL

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Prepare commissioning process based on the Commissioning Checklists found in the UCB Standards website:

http://www.colorado.edu/facilitiesmanagement/pdc/construction/standards/index.html

B. Coordinate the requirements of Project Closeout and Operating and maintenance sections that are part of Division 1.

C. Schedule the required commissioning activities with the University of Colorado Facilities Department and their consultants at least 72 hours prior to conducting Commissioning activities.

PART 2 - MATERIALS

Not Used.

PART 3 - EXECUTION

NOT USED

END OF SECTION
PROJECT INTENT

UNIVERSITY OF COLORADO AT BOULDER
WILLIAMS VILLAGE:
DARLEY TOWERS SOUTH & STEARNS TOWERS WEST
Project No’s. PR007793 & HSG10818

Elevator Modernization Project Intent

1. BID REQUIREMENTS

Friday, December 20, 2013 at 9:00am
Mandatory pre-bid walk thru
Stearns Central – room 178

Thursday, January 2, 2014 at 4:00 pm
All questions, additional information requests to be presented to Lerch Bates/
University in formal written manner.

Monday, January 6, 2014 at 11:00 am
Distribution of Addendum

Wednesday, January 8, 2014 at 11:30 am
Public Bid opening

Elevator contractors must provide a detailed Gant Chart schedule with their bids.

Include;
Notice to Proceed
Provide submittal package ___________ week(s)
Manufacturing ___________ week(s)
Project site mobilization ___________ week(s)
Project Installation ___________ week(s) (Gant chart to indicate days per task)
Number of crews
Daily work hours
Days/work week
Sub-contractor tasks ___________ week(s) / days per task
Inspections ___________ week(s) / days
Commissioning ___________ week(s) / days.

It is the intent of the University of Colorado at Boulder to purchase a similar installation in Stearns West &
Darley South as was installed in Stearns East and Darley North.
The contractor must acquaint themselves and be familiar with the prior installation.
This does not include controller manufacturers, however; fixtures, cab interior finishes and signal devices
should be of similar design and installation location.
2. PROJECT REQUIREMENTS

1. Due to scheduling restrictions at the University, the following project must be completed within the time allotments given.

2. Project begin date is **Wednesday, May 14, 2014**

3. 4 (four) elevators in this project must be inspected and substantially complete for Owner use no later than end of business **Friday, August 1, 2014**.

4. The University of Colorado at Boulder reserves the right to assess **liquidated damages** in the sum of **$2000.00 a day for each day after August 1, 2014** until substantial completion is documented

5. Hours of operation shall include 7am – 11pm - Monday – Saturday to facilitate project schedule requirements;

6. Elevator Contractor will be required to provide daily written reports to UC of Boulder project manager (UCB form is included with bid documents) indicating:
   1. Names of all employees on site each day,
   2. Tasks scheduled for each day
   3. Tasks accomplished per published schedule
   4. Tasks scheduled but not completed,

7. If the daily written report indicates the project is 2 days behind the published schedule, a written recovery plan/schedule will be required within 3 days of such indication. A meeting will be required to provide UC of Boulder assurance of timely delivery and schedule management

3. INTERIM, WARRANTY AND ONGOING MAINTENANCE.

1. Contractor is responsible for all service calls associated with these elevators, for period starting with the modification of first elevator, to one year from completion of the second elevator, in each building. Contractor shall arrive at each property within sixty minutes from time of notification of equipment problem or failure by Purchaser, and have elevator(s) back in service within two hours. This coverage will apply 24 hours/day, seven days/week, and include all Holidays.

2. Contractor will be responsible to have staff available on site during move in and move out (to be defined by purchaser, and not exceed 40 hours/year), to insure all 4 elevators are functioning properly. Associated costs to be negotiated.

3. Contractor will be responsible for all service calls. Service calls resulting from vandalism will be addressed on "case by case" basis. Hourly charges for service calls resulting from vandalism shall not exceed $200.00. Any material used for repairs resulting from vandalism will be charged to purchaser, using actual cost and 20% added fee to cover all other expenses.
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PROJECT PROCEDURES

PART 1 GENERAL

1.01 APPLICABLE CODES

A. Compliance with Regulatory Agencies: Comply with most stringent applicable provisions of following Codes, laws, and/or Authorities, including revisions and changes in effect:
   1. Safety Code for Elevators and Escalators, ASME A17.1
   2. Guide for Inspection of Elevators, Escalators, and Moving Walks, ASME A17.2
   3. Elevator and Escalator Electrical Equipment, ASME A17.5
   4. National Electrical Code, NFPA 70
   5. Americans with Disabilities Act, ADA
   6. Local Fire Authority
   7. Requirements of most stringent provision of local applicable building code.
   9. Architectural Barriers Act Accessibility Standards ABAAS
   10. University of Colorado Standards and Regulations

1.02 STAGING AREA

A. An equipment staging area will be available for use by Contractor. Contractor shall restrict usage to area designated and shall notify Purchaser/Property Management prior to storing of any large equipment which will impose heavy concentrated loading on floor area. Do not store such equipment until approval is received.

1.03 OCCUPANCY AND WORK BY OTHERS

A. Contractor expressly affirms Purchaser’s rights to let other contracts and employ other Contractors in connection with required work. Contractor will afford other Contractors and their workmen reasonable opportunity for introduction and storage of materials and equipment, for execution of their work, and will properly connect and coordinate its work with theirs. Contractor will also incorporate comparable provisions in all its subcontracts.

B. Contractor declares that other Contractors employed by Purchaser on basis of separate contracts may proceed at such times as necessary to install items of work required by Purchaser.

C. Contractor declares that it will cooperate with other Contractors employed by Purchaser and, in addition to other coordination and expediting efforts will coordinate their work by written notices regarding necessity of such work to be done on or before certain dates.

D. Contractor declares that it is responsible for review, stamped, and signed approval of all shop drawings for required work.
E. Contractor hereby declares that content of foregoing paragraphs and influence they may have on project:
1. Shall not cause a change in stipulated Contract Sum
2. Shall not cause a change in Construction Time Schedule

END OF SECTION
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SUBMITTALS

PART 1 GENERAL

1.01 SUBMITTALS

A. Within seven (7) calendar days after award of contract and before beginning equipment fabrication submit shop drawings, and required material samples for review. Allow three (3) days for response to initial submittal.
   1. Scaled or Fully Dimensioned Layout: Plan of pit, hoistway, and machine room indicating equipment arrangement, elevation section of hoistway, details of car enclosures, and car/hall signal fixtures.
   2. Design Information: Indicate equipment lists, reactions, and design information on layouts.
   3. Power Confirmation Information: Design for existing conditions.
   4. Fixtures: Cuts, samples, or shop drawings.
   5. Finish Material: Submit 3" x 12" samples of actual finished material for review of color, pattern, and texture. Compliance with other requirements is the exclusive responsibility of the Contractor. Include, if requested, signal fixtures, lights, graphics, Braille plates, and detail of mounting provisions.
   6. Design Information: Provide calculations verifying the following:
      a. Adequacy of existing electrical provisions.
      b. Adequacy of retained equipment relative to code requirements if car weight increased by more than 5%.
      c. Machine room heat emissions in B.T.U.
      d. Adequacy of existing retained elevator machine beams.
      e. Adequacy of existing car platform structure for intended loading.
   7. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.

B. Submittal review shall not be construed as an indication that submittal is correct or suitable or that the work represented by submittal complies with the Contract Documents. Compliance with Contract Documents, Code requirements, dimensions, fit, and interface with other work is Contractor’s responsibility.

C. Acknowledge and/or respond to review comments within fourteen 14 calendar days of return. Promptly incorporate required changes due to inaccurate data or incomplete definition so that delivery and installation schedules are not affected. Identify and cloud drawing revisions including Contractor elective revisions on each re-submittal. Contractor’s revision response time is not justification for equipment delivery or installation delay.

1.02 FINAL CONTRACT DOCUMENTS

A. See Section 01700, Project Closeout.

END OF SECTION
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PART 1 GENERAL

1.01 FINAL CLEANING

A. See Section 14210 for contractual requirements governing site cleaning. As a minimum:
   1. Elevator hoistways and all equipment therein shall be cleaned and left free of rust, fillings, welding slag, rubbish, loose plaster, mortar drippings, extraneous construction materials, dirt, and dust. Include walls, building beams, sill ledges, and hoistway divider beams.
   2. Care shall be taken by workpersons not to mark, soil, or otherwise deface existing or new surfaces. Clean and restore such surfaces to their original condition.
   3. Clean down surfaces and areas which require final painting and finishing work. Cleaning includes removal of rubbish, broom cleaning of floors, removal of any loose plaster or mortar, dust and other extraneous materials from finish surfaces, and surfaces which will remain visible after the work is complete.

1.02 CONSULTANT'S FINAL OBSERVATION AND REVIEW REQUIREMENTS

A. Review procedure shall apply for individual elevators, portions of groups of elevators and completed groups of elevators accepted on an interim basis, or elevators and groups of elevators completed, accepted, and placed in operation.

B. Contractor shall perform review and evaluation of all aspects of its work prior to requesting Consultant's final review. Work shall be considered ready for Consultant's final contract compliance review when all Contractor's tests are complete and all elements of work or a designated portion thereof are in place and elevator or group of elevators are deemed ready for service as intended.

C. Furnish labor, materials, and equipment necessary for Consultant's review. Notify Consultant five (5) working days in advance when ready for final review of elevator or group of elevators.

D. Consultant's written list of observed deficiencies of materials, equipment and operating systems will be submitted to Contractor for corrective action. Consultant's review shall include as a minimum:
   1. Workmanship and equipment compliance with Contract Documents.
   3. Performance of following is satisfactory:
      a. Starting, accelerating, running
      b. Decelerating, stopping accuracy
      c. Door operation and closing force
      d. Equipment noise levels
      e. Signal fixture utility
      f. Overall ride quality
      g. Performance of door control devices
      h. Operations of emergency two-way communication device
      i. Operations of emergency Intercom two-way communication system
      j. Operations of firefighters' service
k. Operations of remote monitoring devices
l. Operations of emergency brake device

4. Test Results:
a. In all test conditions, obtain specified contract speed, performance times, stopping accuracy without re-leveling, and ride quality to satisfaction of Purchaser and Consultant. Tests shall be conducted under both no load and full load condition.
b. Temperature rise in motor windings limited to 50° Celsius above ambient. A full-capacity one (1) hour running test, stopping at each floor for ten (10) seconds in up and down directions, may be required.

E. Performance Guarantee: Should Consultant’s review identify defects, poor workmanship, variance or noncompliance with requirements of specified codes and/or ordinances, or variance or noncompliance with the requirements of Contract Documents, Contractor shall complete corrective work in an expedient manner to satisfaction of Purchaser and Consultant at no cost as follows:
1. Replace equipment which does not meet code or Contract Document requirements.
2. Perform work and furnish labor, materials, and equipment necessary to meet specified operation and performance.
3. Perform retesting required by governing code authority, Purchaser and Consultant.

F. A follow-up final contract compliance review shall be performed by Consultant after notification by Contractor that all deficiencies have been corrected. Provide Consultant with copies of the initial deficiency report marked to indicate items which Contractor considers complete.

1.03 PURCHASER’S INFORMATION

A. Provide three sets of neatly bound written information necessary for proper maintenance and adjustment of equipment within 30 days following final acceptance. Final retention will be withheld until data is received by Purchaser and reviewed by Consultant. Include the following as minimums:
1. Straight-line wiring diagrams of “as-installed” elevator circuits with index of location and function of components. Provide one set reproducible master. Mount one set wiring diagrams on panels, racked, or similarly protected, in elevator machine room. Provide remaining set rolled and in a protective drawing tube. Maintain all drawing sets with addition of all subsequent changes. These diagrams are Purchaser’s property.
2. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required for inspecting or testing the equipment. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.
3. Provide any necessary interface cards required for equipment maintenance, code mandated testing, and troubleshooting.
4. Lubrication instructions including recommended grade of lubricants.
5. Parts catalogs for all replaceable parts including ordering forms and instructions.
6. Four sets of keys for all switches and control features properly tagged and marked.
7. Neatly bound instructions explaining all operating features including all apparatus in the car and lobby control panels.
8. Neatly bound maintenance and adjustment instructions explaining areas to be addressed, methods and procedures to be used, and specified tolerances to be maintained for all equipment.
9. Diagnostic equipment complete with access codes, adjusters' manuals and set-up manuals for adjustment, diagnosis and troubleshooting of elevator system, and performance of routine safety tests.

B. Non-Proprietary Equipment Design: Provide three sets of neatly bound written information necessary for proper maintenance and adjustment for equipment of within 30 days following final acceptance. Final retention will be withheld until data is received by Purchaser and reviewed by Consultant. Include the following as minimums:

1. Straight-line wiring diagrams of "as-installed" elevator circuits, with index of location and function of components. Provide one set reproducible master. Mount one set wiring diagrams on panels, racked, or similarly protected, in elevator machine room. Provide remaining set rolled and in a protective drawing tube. Maintain all drawing sets with addition of all subsequent changes. These diagrams are Purchaser's property. A legend sheet shall be furnished with each set of drawings to provide the following information:
   a. Name and symbol of each relay, switch, or other apparatus.
   b. Location on drawings, drawing sheet number and area, and location of all contacts.
   c. Location of apparatus, whether on controller or on car.

2. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.

3. Printed instructions explaining all operating features.

4. Complete software documentation for all installed equipment.

5. Lubrication instructions, including recommended grade of lubricants.

6. Parts catalogs listing all replaceable parts including Contractor’s identifying numbers and ordering instructions.

7. Four sets of keys for all switches and control features properly tagged and marked.

8. Diagnostic test devices together with all supporting information necessary for interpretation of test data and troubleshooting of elevator system, and performance of routine safety tests.

9. The elevator installation shall be a design which can be maintained by any licensed elevator maintenance company employing journeymen mechanics, without the need to purchase or lease additional diagnostic devices, special tools, or instructions from the original equipment Manufacturer.
   a. Provide onsite capability to diagnose faults to the level of individual circuit boards and individual discreet components for the solid state elevator controller.
   b. Provide a separate, detachable device, as required to the Purchaser as part of this installation if the equipment for fault diagnosis is not completely self-contained within the controller. Such device shall be in possession of and become property of the Purchaser.
   c. Installed equipment not meeting this requirement shall be removed and replaced with conforming equipment at no cost to the Purchaser.

10. Provide upgrades and/or revisions of software during the progress of the work, warranty period and the term of the ongoing maintenance agreement between the Purchaser and Contractor.

11. Parts catalog detailing part numbers and descriptions

D. Acceptance of such records by Purchaser/Consultant shall not be a waiver of any Contractor deviation from Contract Documents or shop drawings or in any way relieve Contractor from his responsibility to perform work in accordance with Contract Documents.

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RELATED WORK

PART 1 GENERAL

1.01 RELATED WORK BY CONTRACTOR PROVIDED BY OTHER TRADES

1. Wall blockouts and fire rated closure for control and signal fixture boxes which penetrate walls.
2. Cutting and patching walls and floors.
3. Pit access stationary ladder for each elevator.
4. Protect open hoistways and entrances during construction per OSHA Regulations.
5. Protect car enclosure, hoistway entrance assemblies, and special metal finishes from damage.
6. Hoistway venting per Code.

B. Machine Room and Machinery Spaces:

1. Enclosure with access.
2. Self-closing and locking access door.
3. Ventilation and heating. Maintain minimum temperature of 55° F, maximum 90° F. Maintain maximum 80% relative humidity, non-condensing.
4. Class “ABC” fire extinguisher in each elevator machine room, By Purchaser

C. Electrical Service, Conductors, and Devices:

1. Lighting and GFCI convenience outlets in pit, machine room.
   a. 19 ft. candles in machine room –
   b. 10 ft. candles in pit
2. Three-phase mainline copper power feeder to terminals of each elevator controller in the machine room with protected lockable “open” disconnecting means.
3. Single-phase copper power feeder to each elevator controller for car lighting and exhaust blower with individual protected lockable “open” disconnecting means located in machine room.
4. Emergency telephone shared line to each individual elevator control panel in elevator machine room.
5. Fire alarm initiating devices in each elevator lobby, for each group of elevators or single elevator and each machine room to initiate firefighters’ return feature. Device at top of hoistway if sprinklered. Provide alarm initiating signal wiring from hoistway or machine room connection point to elevator controller terminals. Device in machine room and at top of hoistway to provide signal for general alarm and discrete signal for Phase II firefighters’ operation.
6. Firefighters’ telephone jack and announcement speaker in car with connection to individual elevator control panels in elevator machine room and elevator control panel in firefighters’ control room.
7. Conduit from the closest hoistway of each elevator group or single elevator to the firefighters’ control room and/or control console. Coordinate size, number, and location of conduits with Elevator Contractor.
8. Means to automatically disconnect power to affected elevator drive unit and controller prior to activation of machine room fire sprinkler system and/or hoistway fire sprinkler system. Manual shut-off means shall be located outside bounds of machine room.
9. When sprinklers are provided in the hoistway all electrical equipment, located less than 4'-0" above the pit floor shall be identified for use in wet locations.

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1.01 WORK INCLUDED

A. Two traction elevators as follows:
   1. Geared Passenger Elevators Cars 1-2

B. All engineering, equipment, labor, and permits required to satisfactorily complete elevator modernization required by Contract Documents.

C. Applicable conditions of General, Special, and Supplemental Conditions, Division 1, and all sections listed in Contract Documents “Table of Contents.”

D. Preventive maintenance per Section 14210.

E. Additional equipment or finishes furnished under this or other sections, installed under this section:
   1. In car Firefighters’ telephone jacks
   2. Wiring provisions for future card reader security system
   3. Wiring provisions for future CCTV
      a. Hardware and location of installation provided by owner/purchaser

F. Cartage and Hoisting: All required staging, hoisting, and movement to, on, and from the site including new equipment, reused equipment, or dismantling and removal of existing equipment.

G. Unless specifically identified as “Reuse,” “Retain,” or “Refurbish,” provide new equipment.

H. Protective barriers between cars in normal operation and adjacent cars in the modernization process. Full depth and height of hoistway.

I. Hoistway, pit, and machine room barricades as required.

1.02 RELATED WORK PROVIDED UNDER OTHER SECTIONS

A. See Section 01900, Related Work Provided Under Other Sections.

1.03 DEFINITIONS

A. Terms used are defined in the latest edition of the Safety Code for Elevators and Escalators, ASME A17.1.
B. Reference to a device or a part of the equipment applies to the number of devices or parts required to complete the installation.

C. Provisions of this specification are applicable to all elevators unless identified otherwise.

1.04 QUALITY ASSURANCE

A. Compliance with Regulatory Agencies: See Section 01040, Project Procedures.

B. Warranty:
   1. Material and workmanship of installation shall comply in every respect with Contract Documents. Correct defective material or workmanship which develops within one (1) year from date of final acceptance of all work to satisfaction of Architect, Purchaser and Consultant at no additional cost, unless due to ordinary wear and tear or improper use or care by Purchaser. Perform maintenance in accordance with terms and conditions indicated in the Preventive Maintenance Agreement.
   2. Defective is defined to include, but not be limited to: Operation or control system failures, car performance below required minimum, excessive wear, unusual deterioration, or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise, or vibration, and similar unsatisfactory conditions.
   3. Retained Equipment: All retained components, parts, and materials shall be cleaned, checked, modified, repaired, or replaced so each component and its parts are in like new operating condition. Retained equipment must be compatible for integration with new systems. All retained equipment shall be covered under the warranty provisions, of Article 1.04, D, 1 & 2 above. No prorations of equipment or parts shall be allowed on preventive maintenance contract between the Contractor and Purchaser.
   4. Make modifications, requirements, adjustments, and improvements to meet performance requirements of Sections 01700 and 14220.

1.05 DOCUMENT AND SITE VERIFICATION

A. In order to discover and resolve conflicts or lack of definition which might create problems, Contractor must review Contract Documents and site conditions for compatibility with its product prior to submittal of quotation. Review existing structural, electrical, and mechanical provisions for compatibility with Contractor’s products. Purchaser will not pay for change to structural, mechanical, electrical, or other systems required to accommodate Contractor’s equipment.

1.06 SUBMITTALS

A. See Section 01300, Submittals, and Section 01700, Final Contract Compliance Review, Article 1.03.

1.07 PERMIT, TEST AND INSPECTION

A. Obtain and pay for permit, license, and inspection fee necessary to complete installation.

B. Perform test required by Governing Authority in accordance with procedure described in ASME A17.2 Guide for Inspection of Elevators, Escalators, and Moving Walks in the presence of Authorized Representative.

C. Supply personnel and equipment for test and final review by Consultant as required in Section 01700.
1.08 MAINTENANCE

A. Interim: See Section 14210.

B. Warranty Maintenance: See Section 14210.


PART 2 PRODUCTS

2.01 SUMMARY

A. Two (2) Passenger Elevators

B. Unless specifically identified as “retain existing,” provide new equipment.

<table>
<thead>
<tr>
<th>Existing Equipment</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number: Cars No. 1-2</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Capacity: 2500 #</td>
<td>2500 #</td>
</tr>
<tr>
<td>Class Loading: Passenger Class A</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Contract Speed: 200 F.P.M.</td>
<td>200 F.P.M.</td>
</tr>
<tr>
<td>Roping: 1:1 Configuration</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Machine: Geared</td>
<td>Car 1: Retain</td>
</tr>
<tr>
<td>Machine Location: Overhead</td>
<td>Car 2: New</td>
</tr>
<tr>
<td>Operational Control: Duplex Selective Collective Microprocessor-Based System</td>
<td>Duplex Selective Collective Microprocessor-Based System</td>
</tr>
<tr>
<td>Motor Control: SCR - DC Control</td>
<td>AC Variable Voltage</td>
</tr>
<tr>
<td></td>
<td>Variable Frequency</td>
</tr>
<tr>
<td></td>
<td>Microprocessor Based with Digital</td>
</tr>
<tr>
<td></td>
<td>Closed-Loop Feedback</td>
</tr>
<tr>
<td>Power Characteristics: Field Verify</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Stops: 14 Front</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Openings: 14 Front</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Floors Served: B, 1-13 Front</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Travel: Field Verify</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Entrance Size: 42” Wide X 84” High</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Existing Equipment</td>
<td>Disposition</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Entrance Type: Single Speed, Center Opening</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Door Operation: Medium Speed, Heavy-Duty</td>
<td>High Speed, Heavy-Duty, Door Operator, Minimum Opening Speed 2-1/2 F.P.S.</td>
</tr>
<tr>
<td>Door Protection: Infrared, Full Screen Device</td>
<td>3-Dimensional Infrared, Full Screen Device with Differential Timing, Nudging and Interrupted Beam Time</td>
</tr>
<tr>
<td>Safety: Flexible Guide Clamp – Type B, Car</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Guide Rails: Planed Steel Tees</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Buffers: Spring</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Car Enclosure: Battery Powered Emergency Car Lighting.</td>
<td>Provide Separate Constant Pressure Test Button In Car Service Compartment.</td>
</tr>
<tr>
<td>Signal Fixtures: LED Illumination. Contractor’s Vandal</td>
<td></td>
</tr>
<tr>
<td>Resistant – Car / Hall Pushbuttons</td>
<td></td>
</tr>
<tr>
<td>Hall and Car Pushbutton Stations:</td>
<td>Single Hall Pushbutton Riser – Flush Mount. Single Applied Car Operating Panel</td>
</tr>
<tr>
<td>Car Position Indicators:</td>
<td>Single Digital with Car Direction Arrows in Car Operating Panel</td>
</tr>
<tr>
<td>Car Lanterns: Car Entrance Column with Volume Adjustable</td>
<td>Firefighters’ Control Panel</td>
</tr>
<tr>
<td>Electronic Chime or Tone. Sound Twice for Down Direction</td>
<td></td>
</tr>
<tr>
<td>Vandal Resistant Assembly, visible from hall pushbuttons</td>
<td></td>
</tr>
<tr>
<td>Hall Car Position Indicator:</td>
<td>Digital with Car Direction Arrows at Main Floor – Flush Mount with Oversized Stainless Steel Backing Plate at main floor</td>
</tr>
<tr>
<td>Existing Equipment</td>
<td>Disposition</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Communication System:</td>
<td>Emergency Intercom System ( &gt; 60'-0&quot; rise) Location of Master Station – Adjacent Fire Command Panel</td>
</tr>
<tr>
<td></td>
<td>Self-Dialing, Vandal Resistant, Push to Call, Two-Way Communication System with Recall, Tracking and Voiceless Communication</td>
</tr>
<tr>
<td>Fixture Submittal:</td>
<td>Submit Brochure Depicting Contractor’s Proposed Designs with Bid</td>
</tr>
<tr>
<td>Additional Features, Cars 1 &amp; 2:</td>
<td>$ 15,000.00 cab interior finish allowance</td>
</tr>
<tr>
<td></td>
<td>Car Top Inspection Station</td>
</tr>
<tr>
<td></td>
<td>Firefighters’ Service, Phase I and II, including Alternate Floor Return</td>
</tr>
<tr>
<td></td>
<td>Accessibility Signage where Missing</td>
</tr>
<tr>
<td></td>
<td>Stationary Car Return Panel Arranged for Surface Applied Car Operating Panel</td>
</tr>
<tr>
<td></td>
<td>Hoistway Access Switches, Top and Bottom Floors- Wall mounted adjacent hoistway door frames</td>
</tr>
<tr>
<td></td>
<td>Hoistway Door Unlocking Device, All Floors with Escutcheon Rings</td>
</tr>
<tr>
<td></td>
<td>Platform Isolation</td>
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<tr>
<td></td>
<td>Load-Weighing Device</td>
</tr>
<tr>
<td></td>
<td>Anti-Nuisance Feature</td>
</tr>
<tr>
<td></td>
<td>Independent Service Feature</td>
</tr>
<tr>
<td></td>
<td>Future Card Reader wiring provisions, Future CCTV wiring provisions</td>
</tr>
<tr>
<td>Existing Equipment</td>
<td>Disposition</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Firefighters’ Control Panel and Remote Wiring</td>
<td></td>
</tr>
<tr>
<td>Machine, Power Conversion Unit, and Controller Sound Isolation</td>
<td></td>
</tr>
<tr>
<td>Tamper Resistant Fasteners for All Fastenings Exposed to the Public</td>
<td></td>
</tr>
<tr>
<td>One Year Warranty Maintenance</td>
<td></td>
</tr>
<tr>
<td>Firefighters’ Telephone Jack</td>
<td></td>
</tr>
<tr>
<td>No Visible Company Name or Logo</td>
<td></td>
</tr>
<tr>
<td>Wiring Diagrams, Operating Instructions, and Parts Ordering Information</td>
<td></td>
</tr>
<tr>
<td>Monitoring System</td>
<td></td>
</tr>
<tr>
<td>System Diagnostic Means and Instructions,</td>
<td></td>
</tr>
<tr>
<td>Non-Proprietary Control System and Diagnostics Provisions as defined in UCB Traction Elevator Standards See Section 3.08A, 1-8 of this specification.</td>
<td></td>
</tr>
</tbody>
</table>

2.02 MATERIALS

A. See Section 14210.

2.03 CAR AND GROUP PERFORMANCE

A. Car Speed: ± 3% of contract speed under any loading condition.

B. Car Capacity: Safely lower, stop and hold 125% of rated load.

C. Car Stopping Zone: ±1/4" under any loading condition.

D. Door Opening Time: Seconds from start of opening to fully open:
   1. Cars 1-2: 2.0 seconds.

E. Door Closing Time: Seconds from start of closing to fully closed:
   1. Cars 1-2: 3.0 seconds.
F. Car Floor-to-Floor Performance Time: Seconds from start of doors closing until doors are 3/4 open (1/2 open for side opening doors) and car level and stopped at next successive floor under any loading condition or travel direction (10’-0” typical floor height):
   1. Cars 1-2: 10.0 seconds.

G. Noise and Vibration Control
   1. Airborne Noise: Measured noise level of elevator equipment and its operation shall not exceed 60 dBA inside car under any condition including door operation and car ventilation exhaust blower on its highest speed. Limit noise level in the machine room relating to elevator equipment and its operation to no more than 80 dBA. All dBA readings to be taken 3’-0” off the floor and 3’-0” from the equipment using the “A” weighted scale.

2.04 OPERATION

A. Duplex Selective Collective Microprocessor-Based, Cars 1-2:
   1. Operate cars without attendants from pushbuttons in cars and located at each floor. When cars are available, park one car at main floor (“home” car). Park other car where last used (“free” car).
   2. Respond to car calls and hall calls above main floor using the free car. Once a car has started, respond to registered calls in the direction of travel and in the order the floors are reached.
   3. Do not reverse car direction until all car calls have been answered, or until all hall calls ahead of the car and corresponding to the direction of car travel have been answered.
   4. Slow cars and stop automatically at floors corresponding to registered calls in the order in which they are approached in either direction of travel. As slowdown is initiated for a hall call, automatically cancel hall call. Cancel car calls in the same manner. Hold car at arrival floor an adjustable time interval to allow passenger transfer.
   5. Answer calls corresponding to direction in which car is traveling unless call in the opposite direction is the highest (or lowest) call registered.
   6. When the free car is clearing calls, start home car to respond to:
      a. A call registered on home car pushbuttons.
      b. An up hall call registered below free car.
      c. An up or a down call registered above free car while free car is traveling down.
      d. A hall call when free car is delayed in its normal operation for a predetermined period.
   7. When both cars are clearing calls, stop only one car in response to any registered hall call. Return the first car to clear its calls to main floor. Should last service required bring both cars to main floor, the first arriving car becomes the free car.
   8. Illuminate appropriate pushbutton to indicate call registration. Extinguish light when call is answered.

B. Other Items:
   1. Load Weighing: Provide means for weighing car passenger load. Control system to provide dispatching at main floor in advance of normal intervals when car fills to capacity. Provide hall call by-pass when the car is filled to preset percentage of rated capacity and traveling in down direction. Field adjustment range: 10% to 100%.
   2. Anti-Nuisance Feature: If car loading relative to weight in car is not commensurate with number of registered car calls, cancel car calls. Systems employing either load weighing or door protective device for activation of this feature are acceptable.
3. Independent Service: Provide controls for operation of each car from its pushbuttons only. Close doors by constant pressure on desired destination floor button or door close button. Open doors automatically upon arrival at the selected floor.

C. Firefighters’ Service: Provide equipment and operation in accordance with Code requirements.

D. Automatic Car Stopping Zone: Stop car within 1/4" above or below the landing sill. Maintain stopping zone regardless of load in car, direction of travel, distance between landings, hoist rope slippage, or stretch.

E. Remote Monitoring and Diagnostics: Equip each controller and the group dispatch logic controller with standard ports, interface boards, and drivers to accept maintenance, data logging, fault finding diagnostic and monitoring computers, keyboards, modems, and programming tools. The system shall be capable of driving remote color LCD monitors that continually scan and display the status of each car and call.

F. Motion Control: Microprocessor based AC, variable-voltage, variable frequency with digitally encoded closed-loop velocity feedback suitable for operation specified and capable of providing smooth, comfortable car acceleration, retardation, and dynamic braking. Limit the difference in car speed between full load and no load to not more than ±3% of the contract speed.

G. Door Operation: Automatically open doors when car arrives at main floor. At expiration of normal dwell time, close doors. Provide “heavy door/variable air pressure” feature for consistent specified door operation within appropriate speed and inertia limits.


I. CCTV: Provide provisions within the traveling cable for Cars 1-2

2.05 MACHINE ROOM EQUIPMENT

A. Arrange equipment in existing machine room spaces.

1. Car No. 1
   a. Geared Traction Hoist Machine: Retain existing
   b. Restore, clean and paint to function and appear in like new condition.
   c. Drain, flush and provide new gear lubricant.
   d. Replace worn gears and bearings.
   e. Provide supplemental rope and sheave guards as required.
   f. Retrofit new direct drive, digital, closed-loop velocity encoder on hoist machine.
   g. Provide drip pans to collect lubricant seepage.
   h. Clean and true motor commutator. Provide new commutator brushes.
   i. Other work deemed required to provide specified “like new” operation
2. Car No. 2
   a. New Geared Traction Hoist Machine:
      b. Single worm geared or helical geared traction type with AC induction or
         P.M.S.M. ACV3F motor, brake, gear, drive shaft, deflector sheave, and gear
         case mounted in proper alignment on an isolated bedplate. Provide bedplate
         blocking to elevate deflector sheave above machine room floor.
      c. Provide hoist machine mounted direct drive, digital, closed-loop velocity
         encoder.
      d. Provide hoist machine drip pans to collect lubricant seepage.

3. Solid State Power Conversion and Regulation Unit:
   a. Provide solid state, alternating current, variable voltage, variable frequency
      (ACV3F), I.G.B.T. converter/inverter drives.
   b. Design unit to limit current, suppress noise, and prevent transient voltage
      feedback into building power supply. Provide internal heat sink cooling fans
      for the power drive portion of the converter panels. Conform to IEEE
      standards 519-1992 for line harmonics and switching noise.
   c. Isolate unit to minimize noise and vibration transmission. Provide isolation
      transformers, filter networks, and choke inductors.
   d. Suppress solid-state converter noises, radio frequency interference, and
      eliminate regenerative transients induced into the mainline feeders or the
      building standby power generator.
   e. Supplemental direct-current power for the operation of hoist machine brake,
      door operator, dispatch processor, signal fixtures, etc., from separate static
      power supply.

B. Encoder: Direct drive, solid-state, digital type. Update car position at each floor and
   automatically restore after power loss.

C. Controller: UL/CSA labeled.
   1. Compartment: Securely mount all assemblies, power supplies, chassis switches,
      relays, etc., on a substantial, self-supporting steel frame. Completely enclose
      equipment with covers. Provide means to prevent overheating.
   2. Relay Design: Magnet operated with contacts of design and material to insure
      maximum conductivity, long life, and reliable operation without overheating or
      excessive wear. Provide wiping action and means to prevent sticking due to fusion.
      Contacts carrying high inductive currents shall be provided with arc deflectors or
      suppressors.
   3. Microprocessor-Related Hardware:
      a. Provide built-in noise suppression devices which provide a high level of noise
         immunity on all solid-state hardware and devices.
      b. Provide power supplies with noise suppression devices.
      c. Isolate inputs from external devices (such as pushbuttons) with opto-isolation
         modules.
      d. Design control circuits with one leg of power supply grounded.
      e. Safety circuits shall not be affected by accidental grounding of any part of the
         system.
      f. System shall automatically restart when power is restored.
      g. System memory shall be retained in the event of power failure or disturbance.
      h. Equipment shall be provided with Electro Magnetic Interference (EMI)
         shielding within FCC guidelines.
   4. Wiring: CSA labeled copper for factory wiring. Neatly route all wiring
      interconnections and securely attach wiring connections to studs or terminals.
5. Permanently mark components (relays, fuses, PC boards, etc.) with symbols shown on wiring diagrams.
6. Monitoring System Interface: Provide controller with serial data link through RJ45 Ethernet connection and install all devices necessary to monitor items outlined in Section 2.13. Provide monitoring node in each controller and wire terminals to all devices to be monitored. Elevator contractor responsible to connect monitoring system interface to machine room monitoring compartment and LAN. Wiring from the LAN to the machine room monitoring compartment by others.
7. Provide controller or machine mounted auxiliary, lockable “open,” disconnect if mainline disconnect is not in sight of controller and/or machine.

D. Sleeves and Guards: Provide 2” steel angle guards around cable or duct slots through floor slabs or grating. Provide rope and smoke guards for sheaves, cables, and cable slots in machine room

E. Machine and Equipment Support Beams: Retain existing in place. Provide all required supplemental supports and attachments necessary for installation of new hoist machine and motor.
   1. If additional supports are required, provide engineering to assure proper load and reaction bearing.
      a. Provide structural steel beams required for direct support of and attachment to building structure of hoist machine, deflector sheaves, overhead sheaves, governor, and hoist rope dead-end hitch assemblies.
      b. Provide bearing plates, anchors, shelf angles, blocking, embedment, etc., for support and fastening of machine beams or equipment to the building structure.
      c. Isolate machine and overhead sheave beams to prevent noise and vibration transmission to building structure

F. Governor: Retain existing.
   1. Clean.
   2. Check bearings and replace if required.
   3. Recalibrate and seal.
   4. Retrofit bi-directional electrical shutdown switch

G. Emergency Brake:
   1. Provide means to prevent ascending car over-speed and unintended car movement per Code.
   2. Acceptable emergency brake devices:
      a. BODE Rope Brake
      b. Hollister-Whitney Rope Gripper
   3. Mount the auxiliary brake on suitable structural steel supports. Provide a drawing showing the supports, stamped by Professional Engineer verifying the adequacy of the support provided.
   4. Provide control circuits to enable the device to function as required by Code.

2.06 HOISTWAY EQUIPMENT

A. Guide Rails: Retain main and counterweight guide rails in place.
   1. Clean rails and brackets. Remove rust if present
   2. Check all rail and bracket fastenings and tighten.
   3. Realign rails as required to provide smooth car ride.

B. Buffers, Car: Retain existing.
1. Wire Brush and Paint.

C. Sheaves: Machined grooves and sealed bearings. Provide mounting means to machine beams, machine bedplate, car and counterweight structural members, or building structure.

D. Counterweight: Retain existing. Replace worn rollers.

E. Hoist and Governor Ropes
1. 8 x 19 or 8 x 25 Seale construction, traction steel type. Fasten with staggered length, adjustable, spring isolated wedge type shackles.
2. Flat, polyurethane coated reinforced steel belts
3. Governor rope to suit Contractor’s specification.


G. Electrical Wiring and Wiring Connections:
1. Conductors and Connections: Copper throughout with individual wires coded and connections on identified studs or terminal blocks. Use no splices or similar connections in wiring except at terminal blocks, control compartments, or junction boxes. Provide 10% spare conductors throughout. Run spare wires from car connection points to individual elevator controllers in the machine room. Provide four (4) pair of spare shielded communication wires in addition to those required to connect specified items. Tag spares in machine room.
2. Conduit: Painted or galvanized steel conduit, EMT, or duct. Conduit size, 1/2". Flexible heavy-duty service cord may be used between fixed car wiring and car door switches for door protective devices.
3. Traveling Cables: Flame and moisture-resistant outer cover. Prevent traveling cable from rubbing or chafing against hoistway or equipment within hoistway. Provide five (5) pair of shielded wires and one (1) RG-6/U type coaxial cables for card reader. Provide one (1) RG-6/U coaxial future CCTV cables within traveling cable from car controller to car top, plus 6'-0" excess loop at both ends. Provide two (2) pair 14 gauge wire for future CCTV power.
4. Auxiliary Wiring: Connect fire alarm initiating devices, emergency two-way communication system, firefighters’ phone jack, card reader and intercom, in each car controller in machine room.

H. Entrance Equipment: Retain existing. Refurbish/replace and adjust assemblies to ensure smooth and quiet mechanical open and close of doors.

I. Entrance Equipment: Refurbish/replace and adjust assemblies to ensure smooth and quiet mechanical open and close of doors.
1. Door Hangers: Replace as required.
2. Door Rollers: New at all entrances
3. Door Track: Refurbish and/or replace as required.
4. Door Interlocks: New contacts at all entrances
5. Door Closers: New at all entrances

J. Hoistway Door Unlocking Device: Provide unlocking device with escutcheon in door panel at all floors.

K. Hoistway Access Switches: Mount in wall at top and bottom floors. Provide switch with faceplate.
LERCH BATES INC.  ELECTRIC TRACTION ELEVATOR
Elevator Consulting Group  MODERNIZATION

University of Colorado at Boulder  14220 - 12  Lerch Bates Project No. 010001960-01
Williams Village Nos. PR007793 & HSG10818
Darley Towers  South & Stearns Towers West

L. Floor Numbers: Stencil paint 4" high floor designations in contrasting color on inside face of hoistway doors or hoistway fascia in location visible from within car.

2.07 HOISTWAY ENTRANCES
A. Frames: Retain existing.
B. Transom Panels: Retain existing
C. Door Panels: Retain existing. Provide new door gib with fire tabs at all floors. Minimum two gib per panel, one at leading edge, and one at trailing edge of each panel
D. Sight Guards: Retain existing. Replace damaged sight guards.
E. Sills: Retain existing. Clean and polish. Check and tighten all fastenings.
F. Fascia, Toe Guards, and Hanger Covers: Retain existing. Provide as required where damaged or missing. Check and tighten all fastenings.
G. Struts and Headers: Retain existing. Check and tighten all fastenings.
H. Finish of Frames and Doors: Provide final painting requirements to General Contractor where factory prime finish is specified.

<table>
<thead>
<tr>
<th>Cars</th>
<th>Floor</th>
<th>Frames</th>
<th>Door Panels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Retain</td>
<td>Retain</td>
<td>Retain</td>
</tr>
</tbody>
</table>

2.08 CAR EQUIPMENT
A. Frame: Retain Existing. Check and tighten all fastenings.
B. Safety Device: Retain existing. Check and tighten all fastenings. Disassemble, clean, and inspect components. Replace all worn or damaged parts. Reassemble and test for proper operation.
C. Platform: Retain existing. Reinforce if required. Check and tighten all fastenings.
D. Platform Apron: Provide new extended platform apron to meet Code. Minimum 14 gauge steel, reinforced and braced to car platform front with black enamel
E. Guide Shoes: Retain existing. Check and tighten all fastenings. Replace rollers.
F. Finish Floor Covering:
1. Cars 1-2: By Owner
G. Sills: Retain existing. Clean and polish. Check and tighten all fastenings.
H. Doors: New – No. 4 Brushed Satin Stainless Steel.
I. Door Hangers: Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.
J. Door Track: Bar or formed, cold-drawn removable steel track with smooth roller contact surface.

K. Door Header: Construct of minimum 12 gauge steel, shape to provide stiffening flanges.

L. Door Electrical Contact: Prohibit car operation unless car door is closed.

M. Door Clutch: Heavy-duty clutch, linkage arms, drive blocks and pickup rollers or cams to provide positive, smooth, quiet door operation. Design clutch so car doors can be closed, while hoistway doors remain open.

N. Restricted Opening Device: Restrict opening of car doors outside unlocking zone. Plunger type restrictors not acceptable.

O. Door Operator: High speed, linear drive, heavy-duty door operator capable of opening doors at no less than 2-1/2 f.p.s. Accomplish reversal in no more than 2-1/2" of door movement. Provide solid-state door control with closed loop circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Maintain consistent, smooth, and quiet door operation at all floors, regardless of door weight or varying air pressure.

P. Door Control Device:
   1. Infrared Reopening Device: Black fully enclosed device with full screen infrared matrix or multiple beams extending vertically along leading edge of each door panel to minimum height of 7'-0" above finished floor. Device shall prevent doors from closing and reverse doors at normal opening speed if beams are obstructed while doors are closing, except during nudging operation. In event of device failure, provide for automatic shutdown of car at floor level with doors open
      a. Acceptable Infrared 3D Reopening Device:
         1) Cegard/MAX-154 by CEDES
         2) Gatekeeper by Adams
         3) Lambda 3D by Otis
         4) Microlite 3D by ThyssenKrupp
         5) Pana40 Plus 3D by Janus
   2. Nudging Operation: After beams of door control device are obstructed for a predetermined time interval (minimum 20.0 - 25.0 seconds), warning signal shall sound and doors shall attempt to close with a maximum of 2.5 foot pounds kinetic energy. Activation of the door open button shall override nudging operation and reopen doors.
   3. Interrupted Beam Time: When beams are interrupted during initial door opening, hold door open a minimum of 3.0 seconds. When beams are interrupted after the initial 3.0 second hold open time, reduce time doors remain open to an adjustable time of approximately 1.0 - 1.5 seconds after beams are reestablished.
   4. Differential Door Time: Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls.
      a. Car Call: Hold open time adjustable between 3.0 and 5.0 seconds.
      b. Hall Call: Hold open time adjustable between 5.0 and 8.0 seconds. Use hall call time when car responds to coincidental calls.

Q. Car Operating Panel:
   1. One car operating panel per car with faceplate, consisting of a metal box containing vandal resistant operating fixtures, mounted behind the car stationary front return panel. Faceplate shall be hinged and constructed of stainless steel, satin finish.
2. Suitably identify floor buttons, alarm button, door open button, door close button and emergency push-to-call button with SCS, Visionmark, or Entrada cast tactile symbols rear mounted. Configure plates per local building code accessibility standards including Braille. Locate operating controls no higher than 48" above the car floor; no lower than 35" for emergency push-to-call button and alarm button.

3. Provide minimum 3/4" diameter raised floor pushbuttons which illuminate to indicate call registration.

4. Provide alarm button to ring bell located on car. Illuminate button when actuated.

5. Provide keyed stop switch at bottom of car operating panel in locked car service compartment. Mark device to indicate “run” and “stop” positions.

6. Provide “door open” button to stop and reopen doors or hold doors in open position.

7. Provide “door close” button to activate door close cycle. Cycle shall not begin until normal door dwell time for a car or hall call has expired, except firefighters’ operation.

8. Provide firefighters’ Phase II key switch with engraved instructions filled red. Include light jewel, buzzer, and call cancel button.

9. Install firefighters’ telephone jack with bezel matching adjacent controls.

10. Provide lockable service compartment with recessed flush door. Door material and finish shall match car return panel or car operating panel faceplate. Inside surface of door shall contain an integral flush window for displaying the elevator operating permit.

11. Include the following controls in lockable service cabinet with function and operating positions identified by permanent signage or engraved legend:
   a. Inspection switch.
   b. Light switch.
   c. Three-position exhaust blower switch.
   d. Independent service switch.
   e. Constant pressure test button for battery pack emergency lighting.
   f. 120-volt, AC, GFCI protected electrical convenience outlet.
   g. Stop switch.

12. Provide black paint filled (except as noted), engraved, or approved etched signage as follows with approved size and font:
   a. Phase II firefighters’ operating instructions on main operating panel above corresponding keyswitch filled red.
   b. Car number on main car operating panel.
   c. “Certificate of Inspection on File in Building Office” on main car operating panel.
   d. “No Smoking” on main car operating panel.
   e. Car capacity in pounds on service compartment door.

R. Car Top Control Station: Mount to provide safe access and utilization while standing in an upright position on car top.

S. Work Light and Duplex Plug Receptacle: GFCI protected outlet at top and bottom of car. Include on/off switch and lamp guard.

T. Communication System:
   1. “Push to Call,” two-way communication instrument in car with automatic dialing, tracking, and recall features with shielded wiring to car controller in machine room. Provide dialer with automatic rollover capability with minimum two numbers. Provide consolidator to allow multiple phones connected to one (1) line.
      a. “Push to Call” button or adjacent light jewel shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase “PUSH TO CALL” “HELP ON THE WAY” engraved signage adjacent to button.
b. Provide “Push to Call” button tactile symbol, engraved signage, and Braille adjacent to button mounted integral with car front return panel.

2. Firefighters' telephone jack in car and firefighters' panel, with four shielded wires to machine room junction box. Jack bezel shall match adjacent controls.

3. Provide two-way communication between car and emergency personnel station.

2.09 CAR ENCLOSURE

A. Car Enclosure Passenger Elevator: Retain existing. Modify as required for application of new signal and pushbutton fixtures. Check and tighten all fasteners.

B. Provide Fifteen thousand dollar ($ 15,000) cab interior allowance, per car in base bid

2.10 HALL CONTROL STATIONS

A. Pushbuttons: Provide one (1) riser with flush mounted fixtures. Include pushbuttons for each direction of travel which illuminate to indicate call registration. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency situation. Pushbutton design shall match car operating panel pushbuttons. Provide vandal resistant pushbutton and light assemblies. Provide faceplate sufficient to cover existing wall blockout and facilitate handicapped access requirements. Provide any cutting and patching required. LED lamps

2.11 SIGNALS

A. Car Direction Lantern, Cars 1-2: Provide flush-mounted car lantern at existing car entrance locations. Illuminate up or down LED lights and sound electronic tone once for up and twice for down direction travel as doors open. Sound tone once for up direction and twice for down direction. Sound level shall be adjustable from 0 - 80 dBA measured at 5'-0" in front of hall control station and 3'-0" off floor. Provide adjustable car door dwell time to comply with ADA requirements relative to hall call notification time. Car direction lenses shall be arrow shaped with faceplates. Lenses shall be minimum 2-1/2" in their smallest dimension. Provide vandal resistant lantern and light assemblies consisting of series of dots or lines for maximum visibility.

B. Car Position Indicator: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Locate fixture in each car operating panel. When a car leaves or passes a floor, illuminate indication representing position of car in hoistway. Illuminate proper direction arrow to indicate direction of travel.

C. Hall Position Indicator, Cars 1-2: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Provide vandal resistant indicator and light assemblies – flush mount at main floor in existing location with oversized stainless steel backing plate.

D. Faceplate Material and Finish: Stainless steel Satin finish all fixtures.

E. Floor Passing Tone: Provide an audible tone of no less than 20 decibels and frequency of no higher than 1500 Hz, to sound as the car passes or stops at a floor served.

F. Voice Synthesizer: Provide electronic device with easily reprogrammable message and female voice to announce car direction, floor, emergency exiting instructions, etc.
G. Firefighters’ Control Panel: Locate in building fire control room. Fixture faceplate, stainless steel satin finish, including the following features:
   1. Car position and direction indicator (digital-readout). Identify each position indicator with car number.
   2. Indicator showing operating status of car.
   3. Two-position firefighters’ emergency return switch and indicators with engraved instructions filled red.
   4. Firefighters’ telephone jack.
   5. Where applicable, identify all indicators and manual switches with appropriate engraving. Provide conduit and wiring to control panel.

H. Firefighters’ Key Box: Flush-mounted box with lockable hinged cover. Engrave instructions for use on cover per Local Fire Authority requirements.

1. Accumulate hall call registration information as part of monitoring capability. Provide memory capacity for at least the preceding five, 24-hour periods, in blocks of 5 or 15-minute segments, running hour to hour (i.e., 2:00 p.m. to 3:00 p.m.) Provide battery backup to prevent loss of accumulated data due to loss of normal power.
2. Accumulate information for retrieval and use as follows:
   a. Visual and printed summary of hall call registration events by floor, direction, and duration, totaled in 5- or 15-minute segments during any 60-minute block using an internal clock.
   b. Visual and printed summary of hall call registration duration averaged for 5 or 15 minute and hourly periods.
   c. Visual and printed summary of percentage of hall calls answered within 30 and 60 seconds in each 5- or 15-minute period and hourly periods.
   d. Visual and printed summary of time periods during which individual cars are not in group operation (operating separately or out of service).
3. Accumulate system fault data including nature of fault, time, and day. Store and retrieval capabilities for minimum 30-day period.
4. Provide directions and software to accomplish information retrieval.

2.12 INTERCOM AND DISTRESS SIGNAL SYSTEM

A. General: Provide intercommunication system for Cars 1-2. Include all wiring between elevator hoistways and control panels. Include the following stations:

<table>
<thead>
<tr>
<th>Station Location</th>
<th>Type Station</th>
<th>Selection Buttons to Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firefighters’ Control Panel</td>
<td>Master</td>
<td>Machine Room, Cars 1-2</td>
</tr>
<tr>
<td>Cars 1 &amp; 2</td>
<td>Master</td>
<td>Lobby Control Panel Adjacent Firefighter’s Control Panel</td>
</tr>
<tr>
<td>Cars 1-2</td>
<td>Remote</td>
<td>24/7 Monitored Emergency Personnel</td>
</tr>
</tbody>
</table>

B. Basic Equipment:
1. Amplifier providing static-free voice transmission with adequate volume and minimum distortion at all stations, with pre-amplifier capable of receiving voice and music inputs from building and emergency building communication system.
2. Activation of emergency building communication system overrides all other conversations and permits one-way conversation to all master stations in system.

3. Master Stations:
   a. Speaker-microphone combination, and/or handset for two-way communication.
   b. Selection buttons to enable communication with all master stations. Maintain continual reception of hands-free reply from station when a selected button is depressed.
   c. Two-Position “Talk/Listen” Button: Press to talk; release to listen.
   d. Illuminate “in use” light when any master station is being used.
   e. Reset button to make system available for use by any master station.
   f. Volume control knob for adjustment of incoming volume.
   g. Button to establish communications with all stations.
   h. Distress light in lobby panel which illuminates when “push to call” button or alarm button in car is actuated. Energize distress light and buzzer or chime until intercom selection button for that car has been depressed. Sound buzzer or chime in lobby panel simultaneously with illumination of distress light.

4. Remote Stations:
   a. Station in car shall be activated by “push to call” two-way communication button. “Push to call” button shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase “PUSH TO CALL,” “HELP ON THE WAY” engraved signage adjacent to button. Provide “push to call” button tactile symbol, engraved signage, and Braille adjacent to button.
   b. Locate car microphone and speaker, or transceiver/speaker combination in car canopy behind front return panel with drilled speaker pattern, with shielded wiring to machine room junction box.

C. Station Housings:
   1. House master station in machine room in a metal compartment with baked enamel finish. Attach to the group elevator supervisory control panel or wall mount. Provide communication handset with 25'-0” long cord.
   2. Provide control center master intercoms with stainless steel satin finish faceplates and engraved operating instructions. Coordinate faceplate size and installation of units with building Console Supplier.

PART 3 EXECUTION

3.01 SITE CONDITION INSPECTION

A. Prior to beginning installation of equipment, examine hoistway and machine room areas. Verify no irregularities exist which affect execution of work specified.

B. Do not proceed with installation until work in place conforms to project requirements.

3.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver material in Contractor’s original, unopened protective packaging.

B. Store material in original protective packaging. Prevent soiling, physical damage, or moisture damage.

C. Protect equipment and exposed finishes from damage and stains during transportation, erection, and construction.
3.03 INSTALLATION

A. Install all equipment in accordance with Contractor’s instructions, referenced codes, specification, and approved submittals.

B. Install machine room equipment with clearances in accordance with referenced codes, and specification.

C. Install all equipment so it may be easily removed for maintenance and repair.

D. Install all equipment for ease of maintenance.

E. Install all equipment to afford maximum accessibility, safety, and continuity of operation.

F. Remove oil, grease, scale, and other foreign matter from the following equipment and apply one coat of field-applied machinery enamel.
   1. All exposed equipment and metal work installed as part of this work which does not have architectural finish.
   3. Neatly touch up damaged factory-painted surfaces with original paint color. Protect machine-finish surfaces against corrosion.

3.04 FIELD QUALITY CONTROL

A. Work at jobsite will be checked during course of installation. Full cooperation with reviewing personnel is mandatory. Accomplish corrective work required prior to performing further installation.

B. Have Code Authority acceptance inspection performed and complete corrective work.

3.05 ADJUSTMENTS

A. Install rails plumb and align vertically with tolerance of 1/16” in 100’-0”. Secure joints without gaps and file any irregularities to a smooth surface.

B. Static balance car to equalize pressure of guide shoes on guide rails.

C. Lubricate all equipment in accordance with Contractor’s instructions.

D. Adjust motors, power conversion units, brakes, controllers, leveling switches, limit switches, stopping switches, door operators, interlocks, and safety devices to achieve required performance levels.

3.06 CLEANUP

A. Keep work areas orderly and free from debris during progress of project. Remove packaging materials on a daily basis.

B. Remove all loose materials and filings resulting from work.

C. Clean machine room equipment and floor.

D. Clean hoistways, car, car enclosure, entrances, operating and signal fixtures.
3.07 ACCEPTANCE REVIEW AND TESTS

A. Review procedure shall apply for individual elevators, portions of groups of elevators, and completed groups of elevators accepted on an interim basis or elevators and groups of elevators completed, accepted, and placed into operation.

B. Contractor shall perform review and evaluation of all aspects of its work prior to requesting Consultant’s final review. Work shall be considered ready for Consultant’s final contract compliance review when all Contractor’s tests are complete and all elements of work or a designated portion thereof are in place and elevator or groups of elevators are deemed ready for service as intended.

C. Furnish labor, materials, and equipment necessary for Consultant’s review. Notify Consultant a minimum of five (5) working days in advance when ready for final review of elevator or group.

D. Consultants’ written list of observed deficiencies of materials, equipment, and operating systems will be submitted to Contractor for corrective action. Consultant’s review shall include as a minimum:
   1. Workmanship and equipment compliance with Contract Documents.
   3. Performance of following is satisfactory:
      a. Starting, accelerating, running
      b. Decelerating, stopping accuracy
      c. Door operation and closing force
      d. Equipment noise levels
      e. Signal fixture utility
      f. Overall ride quality
      g. Performance of door control devices
      h. Operations of emergency two-way communication device
      i. Operations of firefighters’ service
   4. Test Results:
      a. In all test conditions obtain specified contract speed, performance times, stopping accuracy without re-leveling, and ride quality to satisfaction of Purchaser and Consultant. Tests shall be conducted under both no load and full load condition.
      b. Temperature rise in motor windings limited to 50° Celsius above ambient. A full-capacity one (1) hour running test, stopping at each floor for ten (10) seconds in up and down directions, may be required.

E. Performance Guarantee: Should Consultant’s review identify defects, poor workmanship, variance or noncompliance with requirements of specified codes and/or ordinances, or variance or noncompliance with the requirements of Contract Documents, Contractor shall complete corrective work in an expedient manner to satisfaction of Purchaser and Consultant at no cost as follows:
   1. Replace equipment that does not meet code or Contract Document requirements.
   2. Perform work and furnish labor, materials, and equipment necessary to meet specified operation and performance.

F. A follow-up final contract compliance review shall be performed by Consultant after notification by Contractor that all deficiencies have been corrected. Provide Consultant with
copies of the initial deficiency report marked to indicate items which Contractor considers complete.

3.08 PURCHASER’S INFORMATION

A. Provide three sets of neatly bound written information necessary for proper maintenance and adjustment of equipment within 30 days following final acceptance. Final retention will be withheld until data is received by Purchaser and reviewed by Consultant. Include the following as minimums:

1. Straight-line wiring diagrams of "as-installed" elevator circuits with index of location and function of components. Provide one set reproducible master. Mount one set wiring diagrams on panels, racked, or similarly protected, in elevator control room. Provide remaining set rolled and in a protective drawing tube. Maintain all drawing sets with addition of all subsequent changes. These diagrams are Purchaser’s property.
   a. Provide one (1) electronic copy of all required documentation

2. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.

3. Lubrication instructions including recommended grade of lubricants.

4. Parts catalogs for all replaceable parts including ordering forms, price lists and ordering instructions.

5. Four sets of keys for all switches and control features properly tagged and marked.

6. Diagnostic test devices together with all supporting information / documentation necessary for interpretation of test data, fault code interpretation, manufacturers acronym definitions, adjustment parameters, troubleshooting of elevator system, and performance of routine safety tests.

7. The elevator installation shall be a design that can be maintained by any licensed elevator maintenance company employing journeymen mechanics, or University of Colorado qualified elevator maintenance personnel without the need to purchase or lease additional diagnostic devices, special tools, or instructions from the original equipment Contractor.
   a. At the request of the University of Colorado, Provide 8 hours of onsite controller diagnostic training to University of Colorado qualified elevator maintenance personnel
   b. Provide onsite capability to diagnose faults to the level of individual circuit boards and individual discrete components for the solid state elevator controller.
   c. Provide a separate, detachable device, as required to the Purchaser as part of this installation if the equipment for fault diagnosis is not completely self-contained within the controller. Such device shall be in possession of and become property of the Purchaser.
   d. Installed equipment not meeting this requirement shall be removed and replaced with conforming equipment at no cost to the Purchaser.

8. Provide software upgrades and/or revisions during progress of the work, warranty period and a term of 10 years from the date of substantial completion.

END OF SECTION
# SECTION 14230

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- 1.06 SUBMITTALS
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- 2.03 CAR AND GROUP PERFORMANCE
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SECTION 14230
ELECTRIC TRACTION ELEVATOR MODERNIZATION

University of Colorado at Boulder
Williams Village - PR007793 & HSG10818
Darley Towers South & Stearns Towers West

DARLEY TOWERS SOUTH

PART 1 GENERAL

1.01 WORK INCLUDED

A. Two traction elevators as follows:
   1. Geared Passenger Elevators Cars 1-2

B. All engineering, equipment, labor, and permits required to satisfactorily complete elevator modernization required by Contract Documents.

C. Applicable conditions of General, Special, and Supplemental Conditions, Division 1, and all sections listed in Contract Documents "Table of Contents."

D. Preventive maintenance as described in Section 14210.

E. Additional equipment or finishes furnished under this or other sections, installed under this section:
   1. In car Firefighters’ telephone jacks
   2. Wiring provisions for future card reader security system
   3. Wiring provisions for future CCTV
      a. Hardware and location of installation provided by owner/purchaser

F. Cartage and Hoisting: All required staging, hoisting, and movement to, on, and from the site including new equipment, reused equipment, or dismantling and removal of existing equipment.

G. Unless specifically identified as “Reuse,” “Retain,” or “Refurbish,” provide new equipment.

H. Protective barriers between cars in normal operation and adjacent cars in the modernization process. Full depth and height of hoistway.

I. Hoistway, pit, and machine room barricades as required.

1.02 RELATED WORK PROVIDED UNDER OTHER SECTIONS

A. See Section 01900, Related Work Provided Under Other Sections.

1.03 DEFINITIONS

A. Terms used are defined in the latest edition of the Safety Code for Elevators and Escalators, ASME A17.1.
B. Reference to a device or a part of the equipment applies to the number of devices or parts required to complete the installation.

C. Provisions of this specification are applicable to all elevators unless identified otherwise.

1.04 QUALITY ASSURANCE

A. Compliance with Regulatory Agencies: See Section 01040, Project Procedures.

B. Warranty:
   1. Material and workmanship of installation shall comply in every respect with Contract Documents. Correct defective material or workmanship which develops within one (1) year from date of final acceptance of all work to satisfaction of Architect, Purchaser and Consultant at no additional cost, unless due to ordinary wear and tear or improper use or care by Purchaser. Perform maintenance in accordance with terms and conditions indicated in the Preventive Maintenance Agreement.
   2. Defective is defined to include, but not be limited to: Operation or control system failures, car performance below required minimum, excessive wear, unusual deterioration, or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise, or vibration, and similar unsatisfactory conditions.
   3. Retained Equipment: All retained components, parts, and materials shall be cleaned, checked, modified, repaired, or replaced so each component and its parts are in like new operating condition. Retained equipment must be compatible for integration with new systems. All retained equipment shall be covered under the warranty provisions, of Article 1.04, D, 1 & 2 above. No prorations of equipment or parts shall be allowed on preventive maintenance contract between the Contractor and Purchaser.
   4. Make modifications, requirements, adjustments, and improvements to meet performance requirements of Sections 01700 and 14230.

1.05 DOCUMENT AND SITE VERIFICATION

A. In order to discover and resolve conflicts or lack of definition which might create problems, Contractor must review Contract Documents and site conditions for compatibility with its product prior to submittal of quotation. Review existing structural, electrical, and mechanical provisions for compatibility with Contractor’s products. Purchaser will not pay for change to structural, mechanical, electrical, or other systems required to accommodate Contractor’s equipment.

1.06 SUBMITTALS

A. See Section 01300, Submittals, and Section 01700, Final Contract Compliance Review, Article 1.03.

1.07 PERMIT, TEST AND INSPECTION

A. Obtain and pay for permit, license, and inspection fee necessary to complete installation.

B. Perform test required by Governing Authority in accordance with procedure described in ASME A17.2 Guide for Inspection of Elevators, Escalators, and Moving Walks in the presence of Authorized Representative.

C. Supply personnel and equipment for test and final review by Consultant as required in Section 01700.
1.08 MAINTENANCE

A. Interim: See Section 14210.

B. Warranty Maintenance: See Section 14210.


PART 2 PRODUCTS

2.01 SUMMARY

A. Two (2) Passenger Elevators

B. Unless specifically identified as “retain existing,” provide new equipment.

<table>
<thead>
<tr>
<th>Existing Equipment</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number: Cars No. 1-2</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Capacity: 2500 #</td>
<td>2500 #</td>
</tr>
<tr>
<td>Class Loading: Passenger Class A</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Contract Speed: 200 F.P.M.</td>
<td>200 F.P.M.</td>
</tr>
<tr>
<td>Roping: 1:1 Configuration</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Machine: Geared</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Machine Location: Overhead</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Operational Control: Duplex Selective Collective Microprocessor-Based System</td>
<td>Duplex Selective Collective Microprocessor-Based System</td>
</tr>
<tr>
<td>Motor Control: SCR - DC Control</td>
<td>AC Variable Voltage</td>
</tr>
<tr>
<td>Power Characteristics: Field Verify</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Stops: 13 Front;</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Openings: 13 Front;</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Floors Served: 1-13 Front;</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Travel: Field Verify</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Entrance Size: 42&quot; Wide X 84&quot; High</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Existing Equipment</td>
<td>Disposition</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Entrance Type:</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Door Operation:</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Door Protection:</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Safety:</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Guide Rails:</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Car Enclosure:</td>
<td>Battery Powered Emergency Car Lighting. Provide Separate Constant Pressure Test Button In Car Service Compartment.</td>
</tr>
<tr>
<td>Signal Fixtures:</td>
<td>LED Illumination. Contractor’s Vandal Resistant – Car / Hall Pushbuttons</td>
</tr>
<tr>
<td>Hall and Car Pushbutton Stations:</td>
<td>Single Hall Pushbutton Riser – Flush Mount</td>
</tr>
<tr>
<td>Car Position Indicators:</td>
<td>Single Digital with Car Direction Arrows in Car Operating Panel</td>
</tr>
<tr>
<td>Car Lanterns:</td>
<td>Firefighters’ Control Panel</td>
</tr>
<tr>
<td>Hall Car Position Indicator:</td>
<td>Digital with Car Direction Arrows at Main Floor – Flush Mount with oversized stainless steel backing plate</td>
</tr>
<tr>
<td>Existing Equipment</td>
<td>Disposition</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Communication System:</td>
<td>Emergency Intercom System (&lt; 60'-0&quot; rise) Location of Master Station – Adjacent Fire Command Panel</td>
</tr>
<tr>
<td></td>
<td>Self-Dialing, Vandal Resistant, Push to Call, Two-Way Communication System with Recall, Tracking and Voiceless Communication</td>
</tr>
<tr>
<td>Fixture Submittal:</td>
<td>Submit Brochure Depicting Contractor’s Proposed Designs with Bid</td>
</tr>
<tr>
<td>Additional Features, Cars 1 &amp; 2:</td>
<td>$15,000 per cab, Interior Finish Allowance in Base Bid</td>
</tr>
<tr>
<td></td>
<td>Car Top Inspection Station</td>
</tr>
<tr>
<td></td>
<td>Firefighters’ Service, Phase I and II, including Alternate Floor Return</td>
</tr>
<tr>
<td></td>
<td>Accessibility Signage where Missing</td>
</tr>
<tr>
<td></td>
<td>Stationary Car Return Panel Arranged for Surface Applied Car Operating Panel</td>
</tr>
<tr>
<td></td>
<td>Hoistway Access Switches, Top and Bottom Floors- Wall mounted adjacent hoistway door frames</td>
</tr>
<tr>
<td></td>
<td>Hoistway Door Unlocking Device, All Floors with Escutcheon Rings</td>
</tr>
<tr>
<td></td>
<td>Platform Isolation</td>
</tr>
<tr>
<td></td>
<td>Load-Weighing Device</td>
</tr>
<tr>
<td></td>
<td>Anti-Nuisance Feature</td>
</tr>
<tr>
<td></td>
<td>Independent Service Feature</td>
</tr>
<tr>
<td></td>
<td>Future Card Reader wiring provisions, Future CCTV wiring provisions and installation</td>
</tr>
</tbody>
</table>
## Existing Equipment

<table>
<thead>
<tr>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firefighters’ Control Panel and Remote Wiring</td>
</tr>
<tr>
<td>Machine, Power Conversion Unit, and Controller Sound Isolation</td>
</tr>
<tr>
<td>Tamper Resistant Fasteners for All Fastenings Exposed to the Public</td>
</tr>
<tr>
<td>One Year Warranty Maintenance</td>
</tr>
<tr>
<td>Firefighters’ Telephone Jack</td>
</tr>
<tr>
<td>No Visible Company Name or Logo</td>
</tr>
<tr>
<td>Wiring Diagrams, Operating Instructions, and Parts Ordering Information</td>
</tr>
<tr>
<td>Monitoring System</td>
</tr>
<tr>
<td>System Diagnostic Means and Instructions</td>
</tr>
<tr>
<td>Non-Proprietary Control System and Diagnostics Provisions as defined in UCB Traction Elevator Standards. See Section 3.08A 1-8 of this specification</td>
</tr>
</tbody>
</table>

### 2.02 MATERIALS

A. See Section 14210.

### 2.03 CAR AND GROUP PERFORMANCE

A. Car Speed: ± 3% of contract speed under any loading condition.

B. Car Capacity: Safely lower, stop and hold 125% of rated load.

C. Car Stopping Zone: ±1/4" under any loading condition.

D. Door Opening Time: Seconds from start of opening to fully open:
   1. Cars 1-2: 2.0 seconds.

E. Door Closing Time: Seconds from start of closing to fully closed:
   1. Cars 1-2: 3.0 seconds.
F. Car Floor-to-Floor Performance Time: Seconds from start of doors closing until doors are 3/4 open (1/2 open for side opening doors) and car level and stopped at next successive floor under any loading condition or travel direction (10'-0" typical floor height):
   1. Cars 1-2: 10.0 seconds.

G. Noise and Vibration Control
   1. Airborne Noise: Measured noise level of elevator equipment and its operation shall not exceed 60 dBA inside car under any condition including door operation and car ventilation exhaust blower on its highest speed. Limit noise level in the machine room relating to elevator equipment and its operation to no more than 80 dBA. All dBA readings to be taken 3'-0" off the floor and 3'-0" from the equipment using the "A" weighted scale.

2.04 OPERATION

A. Duplex Selective Collective Microprocessor-Based, Cars 1-2:
   1. Operate cars without attendants from pushbuttons in cars and located at each floor. When cars are available, park one car at main floor ("home" car). Park other car where last used ("free" car).
   2. Respond to car calls and hall calls above main floor using the free car. Once a car has started, respond to registered calls in the direction of travel and in the order the floors are reached.
   3. Do not reverse car direction until all car calls have been answered, or until all hall calls ahead of the car and corresponding to the direction of car travel have been answered.
   4. Slow cars and stop automatically at floors corresponding to registered calls in the order in which they are approached in either direction of travel. As slowdown is initiated for a hall call, automatically cancel hall call. Cancel car calls in the same manner. Hold car at arrival floor an adjustable time interval to allow passenger transfer.
   5. Answer calls corresponding to direction in which car is traveling unless call in the opposite direction is the highest (or lowest) call registered.
   6. When the free car is clearing calls, start home car to respond to:
      a. A call registered on home car pushbuttons.
      b. An up hall call registered below free car.
      c. An up or a down call registered above free car while free car is traveling down.
      d. A hall call when free car is delayed in its normal operation for a predetermined period.
   7. When both cars are clearing calls, stop only one car in response to any registered hall call. Return the first car to clear its calls to main floor. Should last service required bring both cars to main floor, the first arriving car becomes the free car.
   8. Illuminate appropriate pushbutton to indicate call registration. Extinguish light when call is answered.

B. Other Items:
   1. Load Weighing: Provide means for weighing car passenger load. Control system to provide dispatching at main floor in advance of normal intervals when car fills to capacity. Provide hall call by-pass when the car is filled to preset percentage of rated capacity and traveling in down direction. Field adjustment range: 10% to 100%.
   2. Anti-Nuisance Feature: If car loading relative to weight in car is not commensurate with number of registered car calls, cancel car calls. Systems employing either load weighing or door protective device for activation of this feature are acceptable.
3. Independent Service: Provide controls for operation of each car from its pushbuttons only. Close doors by constant pressure on desired destination floor button or door close button. Open doors automatically upon arrival at selected floor.

C. Firefighters’ Service: Provide equipment and operation in accordance with Code requirements.

D. Automatic Car Stopping Zone: Stop car within 1/4" above or below the landing sill. Maintain stopping zone regardless of load in car, direction of travel, distance between landings, hoist rope slippage, or stretch.

E. Remote Monitoring and Diagnostics: Equip each controller and the group dispatch logic controller with standard ports, interface boards, and drivers to accept maintenance, data logging, fault finding diagnostic and monitoring computers, keyboards, modems, and programming tools. The system shall be capable of driving remote color LCD monitors that continually scan and display the status of each car and call.

F. Motion Control: Microprocessor based AC, variable-voltage, variable frequency with digitally encoded closed-loop velocity feedback suitable for operation specified and capable of providing smooth, comfortable car acceleration, retardation, and dynamic braking. Limit the difference in car speed between full load and no load to not more than ±3% of the contract speed.

G. Door Operation: Automatically open doors when car arrives at main floor. At expiration of normal dwell time, close doors. Provide “heavy door/variable air pressure” feature for consistent specified door operation within appropriate speed and inertia limits.


2.05 MACHINE ROOM EQUIPMENT

A. Arrange equipment in existing machine room spaces.

B. Geared Traction Hoist Machine: Retain existing.
   1. Restore, clean and paint to function and appear in like new condition.
   2. Drain, flush and provide new gear lubricant.
   3. Replace worn gears and bearings.
   4. Provide supplemental rope and sheave guards as required.
   5. Retrofit new direct drive, digital, closed-loop velocity encoder on hoist machine.
   6. Provide drip pans to collect lubricant seepage.
   7. Clean and true motor commutator. Provide new commutator brushes.
   8. Other work deemed required to provide specified “like new” operation.
   9. Retrofit new AC V3F induction drive motor to existing gear case.
  10. Completely disassemble, clean, and inspect all brake components. Replace all worn or damaged parts. Reassemble and test for proper operation.

C. Encoder: Direct drive, solid-state, digital type. Update car position at each floor and automatically restore after power loss.

D. Controller: UL/CSA labeled.
   1. Compartment: Securely mount all assemblies, power supplies, chassis switches, relays, etc., on a substantial, self-supporting steel frame. Completely enclose equipment with covers. Provide means to prevent overheating.
2. Relay Design: Magnet operated with contacts of design and material to insure maximum conductivity, long life, and reliable operation without overheating or excessive wear. Provide wiping action and means to prevent sticking due to fusion. Contacts carrying high inductive currents shall be provided with arc deflectors or suppressors.

3. Microprocessor-Related Hardware:
   a. Provide built-in noise suppression devices which provide a high level of noise immunity on all solid-state hardware and devices.
   b. Provide power supplies with noise suppression devices.
   c. Isolate inputs from external devices (such as pushbuttons) with opto-isolation modules.
   d. Design control circuits with one leg of power supply grounded.
   e. Safety circuits shall not be affected by accidental grounding of any part of the system.
   f. System shall automatically restart when power is restored.
   g. System memory shall be retained in the event of power failure or disturbance.
   h. Equipment shall be provided with Electro Magnetic Interference (EMI) shielding within FCC guidelines.

4. Wiring: CSA labeled copper for factory wiring. Neatly route all wiring interconnections and securely attach wiring connections to studs or terminals.

5. Permanently mark components (relays, fuses, PC boards, etc.) with symbols shown on wiring diagrams.

6. Monitoring System Interface: Provide controller with serial data link through RJ45 Ethernet connection and install all devices necessary to monitor items outlined in Section 2.13. Provide monitoring node in each controller and wire terminals to all devices to be monitored. Elevator contractor responsible to connect monitoring system interface to machine room monitoring compartment and LAN. Wiring from the LAN to the machine room monitoring compartment by others.

7. Provide controller or machine mounted auxiliary, lockable “open,” disconnect if mainline disconnect is not in sight of controller and/or machine.

E. Sleeves and Guards: Provide 2” steel angle guards around cable or duct slots through floor slabs or grating. Provide rope and smoke guards for sheaves, cables, and cable slots in machine room

F. Machine and Equipment Support Beams: Retain existing in place. Provide all required supplemental supports and attachments necessary for installation of new hoist machine and motor.
   1. If additional supports are required, provide engineering to assure proper load and reaction bearing.
      a. Provide structural steel beams required for direct support of and attachment to building structure of hoist machine, deflector sheaves, overhead sheaves, governor, and hoist rope dead-end hitch assemblies.
      b. Provide bearing plates, anchors, shelf angles, blocking, embedment, etc., for support and fastening of machine beams or equipment to the building structure.
      Isolate machine and overhead sheave beams to prevent noise and vibration transmission to building structure.

G. Governor: Retain existing.
   1. Clean.
   2. Check bearings and replace if required.
   3. Recalibrate and seal.
   4. Retrofit bi-directional electrical shutdown switch
H. Emergency Brake:
   1. Provide means to prevent ascending car over-speed and unintended car movement per Code.
   2. Acceptable emergency brake devices:
      a. BODE Rope Brake
      b. Hollister-Whitney Rope Gripper
   3. Mount the auxiliary brake on suitable structural steel supports. Provide a drawing showing the supports, stamped by Professional Engineer verifying the adequacy of the support provided.
   4. Provide control circuits to enable the device to function as required by Code.

2.06 HOISTWAY EQUIPMENT

A. Guide Rails: Retain main and counterweight guide rails in place.
   1. Clean rails and brackets. Remove rust.
   2. Check all rail and bracket fastenings and tighten.
   3. Realign rails as required to provide smooth car ride.
   4. Provide supplemental rail brackets and/or backing as required by Code or to enhance car ride quality.

B. Buffers, Car: Retain existing.
   1. Wire Brush and Paint.

C. Sheaves: Machined grooves and sealed bearings. Provide mounting means to machine beams, machine bedplate, car and counterweight structural members, or building structure.

D. Counterweight: Retain existing. Replace worn rollers.

E. Governor and Encoder Pit-tensioning Sheaves: Retain existing. Rebuild as required. As a minimum completely disassemble, clean, replace worn or faulty parts, and recalibrate governor.

F. Governor Ropes: Retain existing or replace if estimated remaining life is less than five years. No proration is allowed under terms of Maintenance Agreement.

G. Hoist Ropes:
   1. 8 x 19 or 8 x 25 Seale construction, traction steel type. Fasten with staggered length, adjustable, spring isolated wedge type shackles.
   2. Flat, polyurethane coated reinforced steel belts
   3. Governor rope to suit Contractor’s specification.


I. Electrical Wiring and Wiring Connections:
   1. Conductors and Connections: Copper throughout with individual wires coded and connections on identified studs or terminal blocks. Use no splices or similar connections in wiring except at terminal blocks, control compartments, or junction boxes. Provide 10% spare conductors throughout. Run spare wires from car connection points to individual elevator controllers in the machine room. Provide four (4) pair of spare shielded communication wires in addition to those required to connect specified items. Tag spares in machine room.
2. Conduit: Painted or galvanized steel conduit, EMT, or duct. Conduit size, 1/2". Flexible heavy-duty service cord may be used between fixed car wiring and car door switches for door protective devices.

3. Traveling Cables: Flame and moisture-resistant outer cover. Prevent traveling cable from rubbing or chafing against hoistway or equipment within hoistway. Provide five (5) pair of shielded wires and one (1) RG-6/U type coaxial cables for card reader. Provide one (1) RG-6/U coaxial future CCTV cables within traveling cable from car controller to car top, plus 3'-0" excess loop at both ends. Provide two (2) pair 14 gauge wire for future CCTV power.

4. Auxiliary Wiring: Connect fire alarm initiating devices, emergency two-way communication system, firefighters' phone jack, card reader and intercom, in each car controller in machine room.

J. Entrance Equipment: Retain existing. Refurbish/replace and adjust assemblies to ensure smooth and quiet mechanical open and close of doors.

K. Entrance Equipment: Refurbish/replace and adjust assemblies to ensure smooth and quiet mechanical open and close of doors.
   1. Door Hangers: Replace as required.
   2. Door Rollers: New at all entrances
   3. Door Track: Refurbish and/or replace as required.
   4. Door Interlocks: New contacts at all entrances
   5. Door Closers: New at all entrances

L. Hoistway Door Unlocking Device: Provide unlocking device with escutcheon in door panel at all floors.

M. Hoistway Access Switches: Mount in wall at top and bottom floors. Provide switch with faceplate.

N. Floor Numbers: Stencil paint 4" high floor designations in contrasting color on inside face of hoistway doors or hoistway fascia in location visible from within car.

2.07 HOISTWAY ENTRANCES

A. Frames: Retain existing.

B. Transom Panels: Retain existing

C. Door Panels: Retain existing. Provide new door gibbs with fire tabs at all floors. Minimum two gibbs per panel, one at leading edge, and one at trailing edge of each panel

D. Sight Guards: Retain existing. Replace damaged sight guards.

E. Sills: Retain existing. Clean and polish. Check and tighten all fastenings.

F. Fascia, Toe Guards, and Hanger Covers: Retain existing. Provide as required where damaged or missing. Check and tighten all fastenings.

G. Struts and Headers: Retain existing. Check and tighten all fastenings.
H. Finish of Frames and Doors: Provide final painting requirements to General Contractor where factory prime finish is specified.

<table>
<thead>
<tr>
<th></th>
<th>Floor</th>
<th>Frames</th>
<th>Door Panels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cars 1-2</td>
<td>Retain</td>
<td>Retain</td>
<td>Retain</td>
</tr>
</tbody>
</table>

2.08 CAR EQUIPMENT

A. Frame: Retain Existing. Check and tighten all fastenings.

B. Safety Device: Retain existing. Check and tighten all fastenings. Disassemble, clean, and inspect components. Replace all worn or damaged parts. Reassemble and test for proper operation.

C. Platform: Retain existing. Reinforce if required. Check and tighten all fastenings.

D. Platform Apron: Provide new extended platform apron to meet Code. Minimum 14 gauge steel, reinforced and braced to car platform front with black enamel.

E. Guide Shoes: Retain existing. Check and tighten all fastenings. Replace rollers.

F. Finish Floor Covering:  
   1. Cars 1-2: By Owner

G. Sills: Retain existing. Clean and polish. Check and tighten all fastenings.

H. Doors: New – No. 4 Brushed Satin Stainless Steel.

I. Door Hangers: Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.

J. Door Track: Bar or formed, cold-drawn removable steel track with smooth roller contact surface.

K. Door Header: Construct of minimum 12 gauge steel, shape to provide stiffening flanges.

L. Door Electrical Contact: Prohibit car operation unless car door is closed.

M. Door Clutch: Heavy-duty clutch, linkage arms, drive blocks and pickup rollers or cams to provide positive, smooth, quiet door operation. Design clutch so car doors can be closed, while hoistway doors remain open.

N. Restricted Opening Device: Restrict opening of car doors outside unlocking zone. Plunger type restrictors not acceptable.

O. Door Operator: High speed, linear drive, heavy-duty door operator capable of opening doors at no less than 2-1/2 f.p.s. Accomplish reversal in no more than 2-1/2" of door movement. Provide solid-state door control with closed loop circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Maintain consistent, smooth, and quiet door operation at all floors, regardless of door weight or varying air pressure.
P. Door Control Device:

1. Infrared Reopening Device: Black fully enclosed device with full screen infrared matrix or multiple beams extending vertically along leading edge of each door panel to minimum height of 7'-0" above finished floor. Device shall prevent doors from closing and reverse doors at normal opening speed if beams are obstructed while doors are closing, except during nudging operation. In event of device failure, provide for automatic shutdown of car at floor level with doors open.
   
a. Acceptable Infrared 3D Reopening Device:
      1) Cegard/Max-154 by CEDES
      2) Gatekeeper by Adams
      3) Lambda 3D by Otis
      4) Microlite 3D by ThyssenKrupp
      5) Pana40 Plus 3D by Janus

2. Nudging Operation: After beams of door control device are obstructed for a predetermined time interval (minimum 20.0 - 25.0 seconds), warning signal shall sound and doors shall attempt to close with a maximum of 2.5 foot pounds kinetic energy. Activation of the door open button shall override nudging operation and reopen doors.

3. Interrupted Beam Time: When beams are interrupted during initial door opening, hold door open a minimum of 3.0 seconds. When beams are interrupted after the initial 3.0 second hold open time, reduce time doors remain open to an adjustable time of approximately 1.0 - 1.5 seconds after beams are reestablished.

4. Differential Door Time: Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls.
   
a. Car Call: Hold open time adjustable between 3.0 and 5.0 seconds.
   
b. Hall Call: Hold open time adjustable between 5.0 and 8.0 seconds. Use hall call time when car responds to coincidental calls.

Q. Car Operating Panel:

1. One car operating panel per car with faceplate, consisting of a metal box containing vandal resistant operating fixtures, mounted behind the car stationary front return panel. Faceplate shall be hinged and constructed of stainless steel, satin finish.

2. Suitably identify floor buttons, alarm button, door open button, door close button and emergency push-to-call button with SCS, Visionmark, or Entrada cast tactile symbols rear mounted. Configure plates per local building code accessibility standards including Braille. Locate operating controls no higher than 48" above the car floor; no lower than 35" for emergency push-to-call button and alarm button.

3. Provide minimum 3/4" diameter raised floor pushbuttons which illuminate to indicate call registration.

4. Provide alarm button to ring bell located on car. Illuminate button when actuated.

5. Provide keyed stop switch at bottom of car operating panel in locked car service compartment. Mark device to indicate “run” and “stop” positions.

6. Provide “door open” button to stop and reopen doors or hold doors in open position.

7. Provide “door close” button to activate door close cycle. Cycle shall not begin until normal door dwell time for a car or hall call has expired, except firefighters’ operation.

8. Provide firefighters’ Phase II key switch with engraved instructions filled red. Include light jewel, buzzer, and call cancel button.

9. Install firefighters’ telephone jack with bezel matching adjacent controls.

10. Provide lockable service compartment with recessed flush door. Door material and finish shall match car return panel or car operating panel faceplate. Inside surface of door shall contain an integral flush window for displaying the elevator operating permit.

11. Include the following controls in lockable service cabinet with function and operating positions identified by permanent signage or engraved legend:
a. Inspection switch.
b. Light switch.
c. Three-position exhaust blower switch.
d. Independent service switch.
e. Constant pressure test button for battery pack emergency lighting.
f. 120-volt, AC, GFCI protected electrical convenience outlet.
g. Stop switch.

12. Provide black paint filled (except as noted), engraved, or approved etched signage as follows with approved size and font:
   a. Phase II firefighters’ operating instructions on main operating panel above corresponding keyswitch filled red.
   b. Car number on main car operating panel.
   c. “Certificate of Inspection on File in Building Office” on main car operating panel.
   d. “No Smoking” on main car operating panel.
   e. Car capacity in pounds on service compartment door.

R. Car Top Control Station: Mount to provide safe access and utilization while standing in an upright position on car top.

S. Work Light and Duplex Plug Receptacle: GFCI protected outlet at top and bottom of car. Include on/off switch and lamp guard.

T. Communication System:
   1. “Push to Call,” two-way communication instrument in car with automatic dialing, tracking, and recall features with shielded wiring to car controller in machine room. Provide dialer with automatic rollover capability with minimum two numbers. Provide consolidator to allow multiple phones connected to one (1) line.
      a. “Push to Call” button or adjacent light jewel shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase “PUSH TO CALL” “HELP ON THE WAY” engraved signage adjacent to button.
      b. Provide “Push to Call” button tactile symbol, engraved signage, and Braille adjacent to button mounted integral with car front return panel.
   2. Firefighters’ telephone jack in car and firefighters’ panel, with four shielded wires to machine room junction box. Jack bezel shall match adjacent controls. Provide two-way communication between car and emergency personnel station.

2.09 CAR ENCLOSURE

A. Car Enclosure Passenger Elevator: Retain existing. Modify as required for application of new signal and pushbutton fixtures. Check and tighten all fasteners.

B. Provide Fifteen thousand dollar ($15,000) cab interior allowance, per car, in base bid

2.10 HALL CONTROL STATIONS

A. Pushbuttons: Provide one (1) riser with flush mounted fixtures. Include pushbuttons for each direction of travel which illuminate to indicate call registration. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency situation. Pushbutton design shall match car operating panel pushbuttons. Provide vandal resistant pushbutton and light assemblies. Provide faceplate sufficient to cover existing wall blockout and facilitate handicapped access requirements. Provide any cutting and patching required. LED lamps
2.11 SIGNALS

A. Car Direction Lantern, Cars 1-2: Provide flush-mounted car lantern at existing car entrance locations. Illuminate up or down LED lights and sound electronic tone once for up and twice for down direction travel as doors open. Sound tone once for up direction and twice for down direction. Sound level shall be adjustable from 0 - 80 dBA measured at 5'-0" in front of hall control station and 3'-0" off floor. Provide adjustable car door dwell time to comply with ADA requirements relative to hall call notification time. Car direction lenses shall be arrow shaped with faceplates. Lenses shall be minimum 2-1/2" in their smallest dimension. Provide vandal resistant lantern and light assemblies consisting of series of dots or lines for maximum visibility.

B. Car Position Indicator: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Locate fixture in each car operating panel. When a car leaves or passes a floor, illuminate indication representing position of car in hoistway. Illuminate proper direction arrow to indicate direction of travel.

C. Hall Position Indicator, Cars 1-2: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Provide vandal resistant indicator and light assemblies – flush mount at main floor in existing location with oversized stainless steel backing plate.

D. Faceplate Material and Finish: Stainless steel Satin finish all fixtures.

E. Floor Passing Tone: Provide an audible tone of no less than 20 decibels and frequency of no higher than 1500 Hz, to sound as the car passes or stops at a floor served.

F. Voice Synthesizer: Provide electronic device with easily reprogrammable message and female voice to announce car direction, floor, emergency exiting instructions, etc.

G. Firefighters’ Control Panel: Locate in building fire control room. Fixture faceplate, stainless steel satin finish, including the following features:
   1. Car position and direction indicator (digital-readout). Identify each position indicator with car number
   2. Indicator showing operating status of car.
   3. Two-position firefighters’ emergency return switch and indicators with engraved instructions filled red.
   4. Firefighters’ telephone jack.
   5. Where applicable, identify all indicators and manual switches with appropriate engraving. Provide conduit and wiring to control panel.

H. Firefighters’ Key Box: Flush-mounted box with lockable hinged cover. Engrave instructions for use on cover per Local Fire Authority requirements.

I. Machine Room Monitoring System: Provide on-site monitoring capability for Cars 1-2
   1. Accumulate hall call registration information as part of monitoring capability. Provide memory capacity for at least the preceding five, 24-hour periods, in blocks of 5 or 15-minute segments, running hour to hour (i.e., 2:00 p.m. to 3:00 p.m.) Provide battery backup to prevent loss of accumulated data due to loss of normal power.
   2. Accumulate information for retrieval and use as follows:
      a. Visual and printed summary of hall call registration events by floor, direction, and duration, totaled in 5- or 15-minute segments during any 60-minute block using an internal clock.
b. Visual and printed summary of hall call registration duration averaged for 5 or 15 minute and hourly periods.
c. Visual and printed summary of percentage of hall calls answered within 30 and 60 seconds in each 5- or 15-minute period and hourly periods.
d. Visual and printed summary of time periods during which individual cars are not in group operation (operating separately or out of service).

3. Accumulate system fault data including nature of fault, time, and day. Store and retrieval capabilities for minimum 30-day period.

4. Provide directions and software to accomplish information retrieval.

2.12 INTERCOM AND DISTRESS SIGNAL SYSTEM

A. General: Provide intercommunication system for Cars 1-2. Include all wiring between elevator hoistways and control panels. Include the following stations:

<table>
<thead>
<tr>
<th>Station Location</th>
<th>Type Station</th>
<th>Selection Buttons to Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firefighters’ Control Panel</td>
<td>Master</td>
<td>Machine Room, Cars 1-2</td>
</tr>
<tr>
<td>Cars 1 &amp; 2</td>
<td>Master</td>
<td>Lobby Control Panel Adjacent Firefighter’s Control Panel</td>
</tr>
<tr>
<td>Cars 1-2</td>
<td>Remote</td>
<td>24/7 Monitored Emergency Personnel</td>
</tr>
</tbody>
</table>

B. Basic Equipment:
1. Amplifier providing static-free voice transmission with adequate volume and minimum distortion at all stations, with pre-amplifier capable of receiving voice and music inputs from building and emergency building communication system.
2. Activation of emergency building communication system overrides all other conversations and permits one-way conversation to all master stations in system.
3. Master Stations:
   a. Speaker-microphone combination, and/or handset for two-way communication.
   b. Selection buttons to enable communication with all master stations. Maintain continual reception of hands-free reply from station when a selected button is depressed.
   c. Two-Position “Talk/Listen” Button: Press to talk; release to listen.
   d. Illuminate “in use” light when any master station is being used.
   e. Reset button to make system available for use by any master station.
   f. Volume control knob for adjustment of incoming volume.
   g. Button to establish communications with all stations.
   h. Distress light in lobby panel which illuminates when “push to call” button or alarm button in car is actuated. Energize distress light and buzzer or chime until intercom selection button for that car has been depressed. Sound buzzer or chime in lobby panel simultaneously with illumination of distress light.
4. Remote Stations:
   a. Station in car shall be activated by “push to call” two-way communication button. “Push to call” button shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase “PUSH TO CALL,” “HELP ON THE WAY” engraved signage adjacent to button. Provide “push to call” button tactile symbol, engraved signage, and Braille adjacent to button.
b. Locate car microphone and speaker, or transceiver/speaker combination in car canopy behind front return panel with drilled speaker pattern, with shielded wiring to machine room junction box.

C. Station Housings:
   1. House master station in machine room in a metal compartment with baked enamel finish. Attach to the group elevator supervisory control panel or wall mount. Provide communication handset with 25'-0" long cord.
   2. Provide control center master intercoms with stainless steel satin finish faceplates and engraved operating instructions. Coordinate faceplate size and installation of units with building Console Supplier.

PART 3 EXECUTION

3.01 SITE CONDITION INSPECTION

A. Prior to beginning installation of equipment, examine hoistway and machine room areas. Verify no irregularities exist which affect execution of work specified.

B. Do not proceed with installation until work in place conforms to project requirements.

3.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver material in Contractor’s original, unopened protective packaging.

B. Store material in original protective packaging. Prevent soiling, physical damage, or moisture damage.

C. Protect equipment and exposed finishes from damage and stains during transportation, erection, and construction.

3.03 INSTALLATION

A. Install all equipment in accordance with Contractor’s instructions, referenced codes, specification, and approved submittals.

B. Install machine room equipment with clearances in accordance with referenced codes, and specification.

C. Install all equipment so it may be easily removed for maintenance and repair.

D. Install all equipment for ease of maintenance.

E. Install all equipment to afford maximum accessibility, safety, and continuity of operation.

F. Remove oil, grease, scale, and other foreign matter from the following equipment and apply one coat of field-applied machinery enamel.
   1. All exposed equipment and metal work installed as part of this work which does not have architectural finish.
   3. Neatly touch up damaged factory-painted surfaces with original paint color. Protect machine-finish surfaces against corrosion.
3.04 FIELD QUALITY CONTROL

A. Work at jobsite will be checked during course of installation. Full cooperation with reviewing personnel is mandatory. Accomplish corrective work required prior to performing further installation.

B. Have Code Authority acceptance inspection performed and complete corrective work.

3.05 ADJUSTMENTS

A. Install rails plumb and align vertically with tolerance of 1/16" in 100'-0". Secure joints without gaps and file any irregularities to a smooth surface.

B. Static balance car to equalize pressure of guide shoes on guide rails.

C. Lubricate all equipment in accordance with Contractor’s instructions.

D. Adjust motors, power conversion units, brakes, controllers, leveling switches, limit switches, stopping switches, door operators, interlocks, and safety devices to achieve required performance levels.

3.06 CLEANUP

A. Keep work areas orderly and free from debris during progress of project. Remove packaging materials on a daily basis.

B. Remove all loose materials and filings resulting from work.

C. Clean machine room equipment and floor.

D. Clean hoistways, car, car enclosure, entrances, operating and signal fixtures.

3.07 ACCEPTANCE REVIEW AND TESTS

A. Review procedure shall apply for individual elevators, portions of groups of elevators, and completed groups of elevators accepted on an interim basis or elevators and groups of elevators completed, accepted, and placed into operation.

B. Contractor shall perform review and evaluation of all aspects of its work prior to requesting Consultant’s final review. Work shall be considered ready for Consultant’s final contract compliance review when all Contractor’s tests are complete and all elements of work or a designated portion thereof are in place and elevator or groups of elevators are deemed ready for service as intended.

C. Furnish labor, materials, and equipment necessary for Consultant’s review. Notify Consultant a minimum of five (5) working days in advance when ready for final review of elevator or group.

D. Consultants’ written list of observed deficiencies of materials, equipment, and operating systems will be submitted to Contractor for corrective action. Consultant’s review shall include as a minimum:
   1. Workmanship and equipment compliance with Contract Documents.

3. Performance of following is satisfactory:
   a. Starting, accelerating, running
   b. Decelerating, stopping accuracy
   c. Door operation and closing force
   d. Equipment noise levels
   e. Signal fixture utility
   f. Overall ride quality
   g. Performance of door control devices
   h. Operations of emergency two-way communication device
   i. Operations of firefighters’ service

4. Test Results:
   a. In all test conditions obtain specified contract speed, performance times, stopping accuracy without re-leveling, and ride quality to satisfaction of Purchaser and Consultant. Tests shall be conducted under both no load and full load condition.
   b. Temperature rise in motor windings limited to 50° Celsius above ambient. A full-capacity one (1) hour running test, stopping at each floor for ten (10) seconds in up and down directions, may be required.

E. Performance Guarantee: Should Consultant’s review identify defects, poor workmanship, variance or noncompliance with requirements of specified codes and/or ordinances, or variance or noncompliance with the requirements of Contract Documents, Contractor shall complete corrective work in an expedient manner to satisfaction of Purchaser and Consultant at no cost as follows:
   1. Replace equipment that does not meet code or Contract Document requirements.
   2. Perform work and furnish labor, materials, and equipment necessary to meet specified operation and performance.

F. A follow-up final contract compliance review shall be performed by Consultant after notification by Contractor that all deficiencies have been corrected. Provide Consultant with copies of the initial deficiency report marked to indicate items which Contractor considers complete.

3.08 PURCHASER’S INFORMATION

A. Provide three sets of neatly bound written information necessary for proper maintenance and adjustment of equipment within 30 days following final acceptance. Final retention will be withheld until data is received by Purchaser and reviewed by Consultant. Include the following as minimums:
   1. Straight-line wiring diagrams of “as-installed” elevator circuits with index of location and function of components. Provide one set reproducible master. Mount one set wiring diagrams on panels, racked, or similarly protected, in elevator control room. Provide remaining set rolled and in a protective drawing tube. Maintain all drawing sets with addition of all subsequent changes. These diagrams are Purchaser’s property.
      a. Provide one (1) electronic copy of all required documentation
   2. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.
3. Lubrication instructions including recommended grade of lubricants.
4. Parts catalogs for all replaceable parts including ordering forms, price lists and ordering instructions.
5. Four sets of keys for all switches and control features properly tagged and marked.
6. Diagnostic test devices together with all supporting information / documentation necessary for interpretation of test data, fault code interpretation, manufacturers acronym definitions, adjustment parameters, troubleshooting of elevator system, and performance of routine safety tests.
7. The elevator installation shall be a design that can be maintained by any licensed elevator maintenance company employing journeymen mechanics, or University of Colorado qualified elevator maintenance personnel without the need to purchase or lease additional diagnostic devices, special tools, or instructions from the original equipment Contractor.
   a. At the request of the University of Colorado, provide 8 hours of onsite controller diagnostic training to University of Colorado qualified elevator maintenance personnel
   b. Provide onsite capability to diagnose faults to the level of individual circuit boards and individual discrete components for the solid state elevator controller.
   c. Provide a separate, detachable device, as required to the Purchaser as part of this installation if the equipment for fault diagnosis is not completely self-contained within the controller. Such device shall be in possession of and become property of the Purchaser.
   d. Installed equipment not meeting this requirement shall be removed and replaced with conforming equipment at no cost to the Purchaser.
8. Provide software upgrades and/or revisions during progress of the work, warranty period and a term of 10 years from the date of substantial completion.

END OF SECTION
SECTION 14210

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THIS DOCUMENT IS PROVIDED AS A REFERENCE TO ESTABLISH UNIVERSITY OF COLORADO AT BOULDER PROJECT ENGINEERING, MANUFACTURING AND INSTALLATION REQUIREMENTS. INDIVIDUAL CAMPUS PROJECTS MAY DIFFER SLIGHTLY IN SPECIFICATIONS REQUIREMENTS. IF A VARIANCE IN REQUIREMENTS IS NOTED, REFER TO INDIVIDUAL PROJECT SPECIFICATIONS.
SECTION 14210

ELECTRIC TRACTION ELEVATORS

PART 1 GENERAL

1.01 WORK INCLUDED

A. Traction elevator(s) as follows:

B. All engineering, equipment, labor, and permits required to satisfactorily complete elevator installation required by Contract Documents.

C. Applicable conditions of General, Special, and Supplemental Conditions, and Division 1.

D. Warranty / Preventive maintenance as described herein.

E. Additional equipment or finishes furnished under other sections, installed under this section:
   1. Building announcement speaker(s) in Elevator cabs
   2. In car Firefighters’ telephone jack(s)
   3. CCTV system – If required
   4. Provisions for and mounting of Card reader security system- if required
   5. Car interior finishes as specified in job specific specifications
   6. Car finish flooring as specified in job specific specifications

1.02 RELATED WORK PROVIDED UNDER OTHER SECTIONS – PROVIDED BY OTHERS

A. Hoistway and Pit: as specified in job specific specifications
   1. Clear, plumb, substantially flush hoistway with variations not to exceed 1” at any point.
   2. Divider beams between adjacent elevators at each floor, pit, and overhead. Supports at each floor for car and counterweight guide rail fastening, including supports for car guide rail fastening above top landing. Intermediate car guide rail support when floor heights exceed 14’-0” or as designated on contract drawings. Intermediate counterweight guide rail supports where floor heights exceed 16’-0”. Building supports not to deflect in excess of 1/8” under normal conditions
   3. Hoist machine supports including two (2) additional horizontal supports above the top terminal landing on the machine side of the hoistway. Locate as required for selected Contractors’ equipment.
   4. Wall blockouts and fire rated closure for control and signal fixture boxes which penetrate walls.
   5. Cutting and patching walls and floors.
   6. Concrete wall pockets and/or structural steel beams for support of hoist machine, rope sheaves, and dead-end hitch beams. Support deflection shall not exceed 1/1666 of span under static load.
   7. Erect front hoistway wall after elevator entrances are installed.
   8. Grout floor up to hoistway sills and around hoistway entrances.
   9. Lockable, self-closing, fire-rated pit door (walk in pits only)
   10. Pit access stationary ladder for each elevator. Retractable ladder if provided shall include an electrical contact conforming to ASME A17.1, Rule 2.2.2.4.2.7.
   11. Structural support at pit floor for buffer impact loads, guide rail loads.
   12. Waterproof pit. Indirect waste drain or sump with flush grate and pump. Sump pump/drain capacity minimum 3000 gallons per hour, per elevator.
13. Protect open hoistways and entrances during construction per OSHA Regulations.
14. Protect car enclosure, hoistway entrance assemblies, and special metal finishes from damage.
15. Hoistway smoke relief venting.
16. Hoistway pressurization for smoke control. If required.
17. Hoist machine ventilation, heating, and/or cooling. Maintain minimum temperature of 55°F, maximum 90°F at the location of the hoist machine.
18. Seal fireproofing to prevent flaking.
19. Single Blind hoistway Rules - Provide emergency access door every third floor and maximum 36'-0" sill to sill. Minimum 28" wide x 80" high single slide or swing, self-closing and self-locking with key removable in locked position only. Mark room side of door with 2" high letters, “Danger: Elevator Hoistway.” Door operable from hoistway side without key.
20. Finished Floor Covering: Unless otherwise specified, Provide Rubber tile 1/8” thick with 1” diameter by 0.025” raised circular pattern. Color to be determined

B. Machine Room: as specified in job specific specifications
   1. Enclosure with access.
   2. Self-closing and locking access door.
   3. Ventilation and heating. Maintain minimum temperature of 55° F, maximum 90° F. Maintain maximum 80% relative humidity, non-condensing.
   4. Paint walls and ceiling.
   5. Class “ABC” fire extinguisher in each elevator controller space.
   6. Seal fireproofing to prevent flaking.
   7. Fire sprinklers where required.

C. Electrical Service, Conductors, and Devices: as specified in job specific specifications
   1. Lighting and GFCI convenience outlets in pit, controller space, and overhead machinery spaces. Provide one additional non-GFCI convenience outlet in pit for sump pump.
   2. Provide compact fluorescent protected lighting fixtures, mounted vertically throughout the hoistway. Attain no less than 10 ft candles illumination in pit and hoistway, 19 ft candles in MRL machine space.
   3. Three-phase mainline copper power feeder with true earthen grounding to terminals of each elevator controller in the controller space with protected lockable “open” disconnecting means.
   4. Single-phase copper power feeder to each elevator controller for car lighting and exhaust blower with individual protected lockable “open” disconnecting means located in the controller space.
   5. Emergency telephone line to each individual elevator control panel in elevator controller space.
   6. Fire alarm initiating devices in each elevator lobby for each group of elevators or single elevator and each controller space to initiate firefighters’ return feature. Device at top of hoistway if sprinklered. Provide alarm initiating signal wiring from hoistway or controller space connection point to elevator controller terminals. Device in machine room and at top of hoistway to provide signal for general alarm and discrete signal for Phase II firefighters’ operation.
   7. Temporary power and illumination to install, test, and adjust elevator equipment.
   8. Firefighters’ telephone jack and announcement speaker in car with connection to individual elevator control panels in the controller space and elevator control panel in firefighters’ control room. If required.
   9. Conduit from the closest hoistway of each elevator group or single elevator to the firefighters’ control room and/or main control console. If required. Coordinate size, number, and location of conduits with Elevator Contractor.
10. Means to automatically disconnect power to affected elevator drive unit and controller prior to activation of the controller space fire sprinkler system, and/or hoistway fire sprinkler system. Manual shut-off means shall be located outside bounds of the controller space. If sprinklers are required

11. When sprinklers are provided in the hoistway all electrical equipment, located less than 4'-0" above the pit floor shall be identified for use in wet locations. Exception: seismic protection devices.

12. Single-phase power feeders to main control console and firefighters’ control panel.

13. Single-phase power feeder to elevator intercom amplifier in the elevator controller space. If present.

14. Single-phase power feeder to each elevator controller in the controller space with protected, lockable “open” disconnecting means for car heating and air conditioning unit. If present.

15. Single-phase power feeders to controller(s) for CCTV with lockable “open” disconnecting means. If present.

D. Standby Power Provision: If present or required as specified in job specific specifications

1. Standby power of normal voltage characteristics via normal electrical feeders to run one elevator at a time in each elevator group and/or single elevator unit at full-contract car speed and capacity.

2. Conductor from auxiliary form “C” dry contacts, located in the standby power transfer switch to a designated elevator control panel in each elevator group and/or single elevator unit. Provide a time delay of 30 - 45 seconds for pre-transfer signal in either direction.

3. Standby single-phase power to group controller, and each elevator controller for car lighting, exhaust blower, emergency signaling device, intercom amplifier, hoist machine cooling fan, car heating and air conditioning unit.

4. Means for absorbing regenerated power during an overhauling load condition per NEC 620.91. Elevator(s) will employ IGBT drive, presenting a non-linear active load.

5. Standby power to machine room, pit, and overhead machinery space lighting.

6. Standby power to hoist machine and control room ventilation or air conditioning.

7. Standby power to emergency communications device(s).

1.03 DEFINITIONS

A. Terms used are defined in the latest edition of the Safety Code for Elevators and Escalators, ASME A17.1.

B. Reference to a device or a part of the equipment applies to the number of devices or parts required to complete the installation.

C. Provisions of this specification are applicable to all elevators unless identified otherwise.

1.04 QUALITY ASSURANCE

A. Approved Contractors: Alternate Contractors must receive approval of the owner at least 14 calendar days prior to bid date.

1. Machine Roomless Gearless Elevator(s): ThyssenKrupp, KONE, Otis, Schindler, Global Tardiff, Imperial, Hollister Whitney, GAL, MCE

2. Car Enclosure: Eklund’s Inc., Gunderlin, Ltd., Hauenstein & Burmeister, ThyssenKrupp, KONE, Otis, Schindler, Tyler, Schumacher

3. Hoistway Entrance: Gunderlin, Hauenstein & Burmeister, ThyssenKrupp, KONE, Otis, Schindler, Tyler, Columbia
B. Compliance with Regulatory Agencies: Comply with most stringent applicable provisions of following codes, laws, and/or authorities, including revisions and changes in effect:
1. Safety Code for Elevators and Escalators, ASME A17.1
2. Guide for Inspection of Elevators, Escalators, and Moving Walks, ASME A17.2
3. Elevator and Escalator Electrical Equipment, ASME A17.5
4. National Electrical Code, NFPA 70
5. Americans with Disabilities Act, ADA
6. Local Fire Authority
7. Requirements of IBC, DSA, and all other Codes, Ordinances and Laws applicable within the governing jurisdiction
9. Uniform Federal Accessibility Standard, UFAS
10. University of Colorado at Boulder standards and practices

C. Warranty:
1. Material and workmanship of installation shall comply in every respect with Contract Documents. Correct defective material or workmanship which develops within one year from date of final acceptance of all work to satisfaction of Architect, Purchaser and Consultant at no additional cost, unless due to ordinary wear and tear, or improper use or care by Purchaser. Perform maintenance in accordance with terms and conditions indicated in the Preventive Maintenance Agreement.
2. Defective is defined to include, but not limited to: operation or control system failures, car performance below required minimum, excessive wear, unusual deterioration, or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise, or vibration, and similar unsatisfactory conditions.
3. Make modifications, requirements, adjustments, and improvements to meet performance requirements in Parts 2 and 3.

1.05 DOCUMENT VERIFICATION

A. In order to discover and resolve conflicts or lack of definition which might create problems, Contractor must review Contract Documents for compatibility with its product prior to submittal of quotation. Purchaser will not pay for change to structural, mechanical, electrical, or other systems required to accommodate Contractor’s equipment.

1.06 SUBMITTALS

A. Within 60 calendar days after award of contract and before beginning equipment fabrication, submit shop drawings and required materials for review as outlined in Division I. Allow 30 calendar days for response to initial submittal.
1. Scaled or Fully Dimensioned Layout: Plan of pit, hoistway and machine room indicating equipment arrangement, elevation section of hoistway, details of car enclosures, hoistway entrances, and car/hall signal fixtures.
2. Design Information: Indicate equipment lists, reactions, and design information on layouts.
4. Fixtures: Cuts, samples, or shop drawings.
5. Finish Material: Submit 3” x 12” samples of actual finished material for Architect review of color, pattern, and texture. Compliance with other requirements is the exclusive responsibility of the Provider. Include, if requested, signal fixtures, lights, graphics, Braille plates, and details of mounting provisions.
B. Acknowledge and/or respond to review comments within 14 calendar days of return. Promptly incorporate required changes due to inaccurate data or incomplete definition so that delivery and installation schedules are not affected. Provider’s revision response time is not justification for equipment delivery or installation delay.

1.07 PERMIT, TEST AND INSPECTION

A. Obtain and pay for permit, license, and inspection fee necessary to complete installation.

B. Perform test required by Governing Authority in accordance with procedure described in ASME A17.2 Guide for Inspection of Elevators, Escalators, and Moving Walks in the presence of Authorized Representative.

C. Supply personnel and equipment for test and final review, as required in Part 3.

1.08 MAINTENANCE

A. Interim:
   1. When one or more elevators are near completion and ready for service, the General Contractor may accept elevators for interim use and place in service prior to substantial completion of project, entirely at their own risk.
   2. During this period General Contractor may pay a mutually agreed upon monthly amount per elevator for preventive maintenance to the elevator contractor. Indicate amount per unit per month with quotation.
   3. Temporary acceptance form must be acceptable to General Contractor and signed prior to use.
   4. General Contractor must provide or pay for temporary hoistway and car enclosures; protect installed equipment and finishes; pay for and return elevators to elevator sub-contractor for all cleaning, repairs, and replacement of materials necessary to restore elevator to “as-new” condition as determined solely by representatives of the University of Colorado prior to final acceptance.

B. Warranty Maintenance:
   1. Provide preventive maintenance and 24-hour emergency callback service for one year commencing on date of final acceptance by Purchaser. Systematically examine, adjust, clean, and lubricate all equipment. Repair or replace defective parts using parts produced by the Contractor of installed equipment. Maintain elevator control room, hoistway, and pit in clean condition.
   2. Use competent personnel, acceptable to the Purchaser, supervised and employed by Contractor.
   3. The warranty maintenance period specified in Item 1 above shall be extended one (1) month for each three (3) month period in which equipment related failures average more than .25 per unit per month.
   4. Purchaser retains the option to delete cost of warranty maintenance from new equipment contract and remit twelve (12) equal installments directly to Contractor during period in which maintenance is being performed.
   5. Use competent personnel, acceptable to the Purchaser, employed and supervised by Contractor.
PART 2 PRODUCTS

2.01 MATERIALS

A. Steel:

B. Stainless Steel: Type 302 or 304, complying with ASTM A167, with standard tempers and hardness required for fabrication, strength and durability. Apply mechanical finish on fabricated work in the locations shown or specified, Federal Standard and NAAMM nomenclature, with texture and reflectivity required to match Architect's sample. Protect with adhesive paper covering.
   1. No. 4: Directional polish (satin finish). Graining directions as shown or, if not shown, in longest dimension.
   2. No. 8: Reflective polish (mirror finish).
   3. Textured: 5WL as manufactured by Rigidized Metals or Windsor pattern 5-SM as manufactured by Rimex Metals or approved equal with .050 inches mean pattern depth with bright directional polish (satin finish).

C. Bronze: Stretcher-leveled, re-squared sheets composed of 60% copper and 40% zinc similar to Muntz Metal, Alloy Group 2, with standard temper and hardness required for fabrication, strength, and durability. Clean and treat bronze surfaces before mechanical finish. After completion of the final mechanical finish on the fabricated work, use a chemical cleaner to produce finish (Federal Standard and NAAMM nomenclature) matching Architect's sample:
   1. No 4 Satin: Directional polish finish. Fine-satin clear-coated with clear-organic coating recommended by Fabricator. Provide graining direction as shown or, if not shown, in longest dimension.
   2. No. 8 Mirror: Reflective polish finish with no visible graining. Bright-polished clear-coated finish with clear-organic lacquer coating recommended by Fabricator.
   3. Acid-Etched Pattern: Provide a No. 8 mirror reflective-polished background with selectively acid-etched, matte-textured, custom pattern as shown. Acid selection and dilution (if required) recommended by Fabricator. After final finishing, coat bronze with clear-organic lacquer coating recommended by Fabricator.

D. Aluminum: Extrusions per ASTM B221; sheet and plate per ASTM B209.

E. Plastic Laminate: ASTM E84 Class A and NEMA LD3.1, Fire-Rated Grade (GP-50), Type 7, 0.050" ± 0.005" thick, color and texture as follows:
   1. Exposed Surfaces: Color and texture selected by Architect.
   2. Concealed Surfaces: Contractor's standard color and finish.

F. Paint: Clean exposed metal parts and assemblies of oil, grease, scale, and other foreign matter and factory paint one shop coat of standard rust-resistant primer. After erection, provide one finish coat of industrial enamel paint. Galvanized metal need not be painted.

G. Prime Finish: Clean all metal surfaces receiving a baked enamel paint finish of oil, grease, and scale. Apply one coat of rust-resistant primer followed by a filler coat over uneven surfaces. Sand smooth and apply final coat of primer.
H. Baked Enamel Finish: Prime finish per above. Unless specified “prime finish” only, apply and bake three (3) additional coats of enamel in the selected solid color.


2.02 CAR AND GROUP PERFORMANCE

A. Car Speed: ± 3% of contract speed under any loading condition.

B. Car Capacity: Safely lower, stop and hold 125% of rated load.

C. Car Stopping Zone: ±1/4” under any loading condition.

2.03 OPERATION

A. Approved non-proprietary microprocessor-based elevator controls and landing systems are as follows;
   1. Computerized Elevator Controls Corporation
   2. Elevator Controls Corporation
   3. Motion Control Engineering
   4. SmartRise
   5. Galaxy
   6. Original Equipment Manufacturers
      a. Major Manufacturers equipment may be substituted with documentation confirming strict adherence to Section 14215, 3.08, A, 1-9.
         1) KONE, Otis, ThyssenKrupp, Schindler

B. Selective Collective Microprocessor Based (Car(s)):
   1. Operate car without attendant from pushbuttons in car and located at each floor. When car is available, automatically start car, and dispatch it to floor corresponding to registered car or hall call. Once car starts, respond to registered calls in direction of travel and in the order the floors are reached.
   2. Do not reverse car direction until all car calls have been answered, or until all hall calls ahead of car and corresponding to the direction of car travel have been answered.
   3. Slow car and stop automatically at floors corresponding to registered calls, in the order in which they are approached in either direction of travel. As slowdown is initiated for a hall call, automatically cancel hall call. Cancel car calls in the same manner. Hold car at arrival floor an adjustable time interval to allow passenger transfer.
   4. Answer calls corresponding to direction in which car is traveling unless call in the opposite direction is highest (or lowest) call registered.
   5. Illuminate appropriate pushbutton to indicate call registration. Extinguish light when call is answered.

C. Duplex Selective Collective Microprocessor-Based, Car(s):
   1. Operate cars without attendants from pushbuttons in cars and located at each floor. When cars are available, park one car at main floor (“home” car). Park other car where last used (“free” car).
   2. Respond to car calls and hall calls above main floor using the free car. Once a car has started, respond to registered calls in the direction of travel and in the order the floors are reached.
3. Do not reverse car direction until all car calls have been answered, or until all hall
calls ahead of the car and corresponding to the direction of car travel have been
answered.
4. Slow cars and stop automatically at floors corresponding to registered calls in the
order in which they are approached in either direction of travel. As slowdown is
initiated for a hall call, automatically cancel hall call. Cancel car calls in the same
manner. Hold car at arrival floor an adjustable time interval to allow passenger
transfer.
5. Answer calls corresponding to direction in which car is traveling unless call in the
opposite direction is the highest (or lowest) call registered.
6. When the free car is clearing calls, start home car to respond to:
   a. A call registered on home car pushbuttons.
   b. An up hall call registered below free car.
   c. An up or a down call registered above free car while free car is traveling down.
   d. A hall call when free car is delayed in its normal operation for a predetermined
      period.
7. When both cars are clearing calls, stop only one car in response to any registered
   hall call. Return the first car to clear its calls to main floor. Should last service
   required bring both cars to main floor, the first arriving car becomes the free car.
8. Illuminate appropriate pushbutton to indicate call registration. Extinguish light when
call is answered.

D. Group Automatic, Car(s)
1. Include, as a minimum, the following features:
   a. Operate cars as a group capable of balancing service and providing continuity
      of group operation with one or more cars removed from the system.
   b. Register service calls from pushbuttons located at each floor and in each car.
      Slow cars and stop automatically at floors corresponding to registered calls.
      Make stops at successive floors for each direction of travel irrespective of
      order in which calls are registered except when bypassing hall calls to balance
      and improve overall service; stop only one car in response to a particular hall
      call. Assign hall calls to specific cars and continually review and modify those
      assignments to improve service. Simultaneous to initiation of slowdown of a
      car for a hall call, cancel that call. Render hall pushbutton ineffective until car
      doors begin to close after passenger transfer. Cancel car calls in the same
      manner. Give priority to coincidental car and hall calls in car assignment.
   c. Operate system to meet changing traffic conditions on a service demand
      basis. Include provisions for handling traffic which may be heavier in either
direction, intermittent or very light. As traffic demands change, automatically
      and continually modify group and individual car assignment to provide the
      most-effective means to handle current traffic conditions. Provide means to
      sense long-wait hall calls and preferentially serve them. Give priority to
      coincidental car and hall calls in hall call assignment. Accomplish car direction
      reversal without closing and reopening doors.
   d. Use easily reprogrammable system software. Design basic algorithm to
      optimize service based on equalizing system response to registered hall calls
      and equalizing passenger trip time to shortest possible time.
   e. Serve floors below main floor in a manner which logically minimizes delay in
      passing or stopping at main floor in both directions of travel. Provide manual
      means to force a stop at the main floor when passing to or from lower levels.
   f. Required Features:
      1) Dispatch Protection: Backup dispatching shall function in the same
         manner as the primary dispatching.
      2) Delayed Car Removal: Automatically remove delayed car from group
         operation.
3) Position Sensing: Update car position when passing or stopping at each landing.

4) Hall Pushbutton Failure: Provide multiple power sources and separate fusing for pushbutton risers.

5) Communication link: Provide serial or duplicate communication link for all group and individual car computers.

E. Other Items:

1. Load Weighing: Provide means for weighing car passenger load. Control system to provide dispatching at main floor in advance of normal intervals when car fills to capacity. Provide hall call by-pass when the car is filled to preset percentage of rated capacity and traveling in down direction. Field adjustment range: 10% to 100%.

2. Anti-Nuisance Feature: If car loading relative to weight in car is not commensurate with number of registered car calls, cancel car calls. Systems employing either load weighing or door protective device for activation of this feature are acceptable.

3. Independent Service: Provide controls for operation of each car from its pushbuttons only. Close doors by constant pressure on desired destination floor button or door close button. Open doors automatically upon arrival at selected floor.

4. Key requirements for all key operated devices must conform to the University master key plan, Medco brand.

F. Firefighters’ Service: Provide equipment and operation in accordance with Code requirements.

G. Automatic Car Stopping Zone: Stop car within 1/4” above or below the landing sill. Maintain stopping zone regardless of load in car, direction of travel, distance between landings, hoist rope slippage or stretch.

H. Remote Monitoring and Diagnostics: Equip each controller with standard ports, interface boards, and drivers to accept maintenance, data logging, fault finding diagnostic, and monitoring computers, keyboards, modems, and programming tools. The system shall be capable of driving remote color LCD monitor(s) that continually scan and display the status of each car and call.

I. Motion Control: Microprocessor based AC, variable-voltage, variable frequency with digitally encoded closed-loop velocity feedback suitable for operation specified and capable of providing smooth, comfortable car acceleration, retardation, and dynamic braking. Limit the difference in car speed between full load and no load to not more than ±3% of the contract speed.

J. Selective Leveling: Provide means to limit elevator car speed when traveling between adjacent floors.

K. Passenger Door Operation: Automatically open doors when car arrives at main floor. At expiration of normal dwell time, close doors. Reopen doors when car is designated for loading. Provide front or rear selective door operation for front and rear application.

L. Power Freight Door Operation: Open door and gate automatically when car arrives at a floor. Control door and gate closing by using constant-pressure buttons on car or at each floor. Provide passenger sequence operation. Provide reversing safety edge device on car gate. Provide automatic door and gate closing feature with warning buzzer.

M. Standby Lighting and Alarm: Car mounted battery unit with solid-state charger to operate alarm bell and car emergency lighting. Battery to be rechargeable with minimum 5-year life
expectancy. Include required transformer. Provide constant pressure test button in service compartment of car operating panel. Provide lighting integral with portion of normal car lighting system.

N. Standby Power Operation: If provided or required
1. Upon loss of normal power, adequate standby power will be supplied via building electrical feeders to simultaneously start and run one car in each group and single cars at contract car speed and capacity.
2. Automatically return one car at a time, in each group and single car(s), nonstop to designated floor, open doors for approximately 3.0 seconds, close doors, and park car. During return operation, car and hall call pushbuttons shall be rendered inoperative. As each car parks, system shall immediately select the next car until all cars in a group have returned to the designated floor. If a car fails to start or return within 30 seconds, system shall automatically select the next car in the group to automatically return.
3. When all cars in a group have returned to the designated floor, one car in each group shall be designated for automatic operation. When a service demand exists for 30 seconds and designated car fails to start, next available car in the group shall be automatically selected for operation.
4. Provide separate group selection switch(es) in firefighters’ control panel and security control panel. If required.
   a. Switch(es) shall be labeled “STANDBY POWER OVERRIDE” with positions marked “AUTO” and appropriate car numbers controlled by each respective switch. Key shall be keyed same as key utilized for firefighters’ Phase I and II key switch. Key shall be removable in “AUTO” position only.
   b. Switch shall override automatic return and automatic selection functions, and cause the manually selected car to operate. Manual selection shall cause car to start and proceed to designated floor and open and close its doors before standby power is manually transferred to next selected car.
   c. Provide “STANDBY POWER” indicator lights, one per car, in firefighters’ control panel and security control panel. Indicator light illuminates when corresponding car is selected, automatically or manually, to operate on standby power.
5. Successive Starting: When normal power is restored or there has been a power interruption, individual cars in each bank shall restart at five second intervals.

2.04 MACHINE ROOM EQUIPMENT

A. Arrange equipment in spaces shown on drawings.

B. Geared Traction Hoist Machine:
1. Single worm geared or helical geared traction type with AC induction or P.M.S.M. ACV3F motor, brake, gear, drive shaft, deflector sheave, and gear case mounted in proper alignment on an isolated bedplate. Provide bedplate blocking to elevate secondary or deflector sheave above machine room floor.
2. Provide hoist machine mounted direct drive, digital, closed-loop velocity encoder.
3. Provide hoist machine drip pans to collect lubricant seepage.
4. Provide machine bedplate mounted deflector sheave A-frame or supporting steel beams and fastenings to mount deflector sheaves to building structure. Provide minimum 16 gauge easily removable sound insulated sheet metal closures in hoistway wall opening around machine (when machine is shown as effect as below).
5. Provide ladders and platforms with handrails and toeboards for overhead sheave access within the bounds of the machine room.
C. Gearless Traction Hoist Machine:
   1. AC induction or P.M.S.M. ACV3F gearless traction type motor with brake, drive sheave, and deflector sheave mounted in proper alignment on a common, isolated bedplate. Provide bedplate blocking to elevate secondary or deflector sheave above machine room floor.
   2. Provide hoist machine mounted direct drive, digital, closed-loop velocity encoder.
   3. Provide machine bedplate mounted deflector sheaves or supporting steel beams and fastenings to mount deflector sheaves to building structure. Provide minimum 16 gauge easily removable sound insulated sheet metal closures in hoistway wall opening around machine (when machine is shown as effect as below).
   4. Provide ladders and platforms with handrails and toeboards for overhead sheave access within the bounds of the machine room.

D. Solid State Power Conversion and Regulation Unit: Provide solid-state, alternating current, variable voltage, variable frequency (ACV3F), I.G.B.T. converter/inverter drives.
   1. Design unit to limit current, suppress noise, and prevent transient voltage feedback into building power supply. Provide internal heat sink cooling fans for the power drive portion of the converter panels. Conform to IEEE standards 519-1992 for line harmonics and switching noise.
   2. Isolate unit to minimize noise and vibration transmission. Provide isolation transformers, filter networks, and choke inductors.
   3. Suppress solid-state converter noises, radio frequency interference, and eliminate regenerative transients induced into the mainline feeders or the building standby power generator.
   4. Supplemental direct-current power for the operation of hoist machine brake, door operator, dispatch processor, signal fixtures, etc., from separate static power supply.
   5. ACV3F Drives for gearless elevators shall be regenerative and utilize IGBT converter/inverter and dynamic braking during overhauling condition.

E. Encoder: Direct drive, solid-state, digital type. Update car position at each floor and automatically restore after power loss.

F. Controller: UL/CSA labeled.
   1. Compartment: Securely mount all assemblies, power supplies, chassis switches, relays, etc., on a substantial, self-supporting steel frame. Completely enclose equipment with covers. Provide means to prevent overheating.
   2. Relay Design: Magnet operated with contacts of design and material to insure maximum conductivity, long life, and reliable operation without overheating or excessive wear. Provide wiping action and means to prevent sticking due to fusion. Contacts carrying high inductive currents shall be provided with arc deflectors or suppressors.
   3. Microprocessor-Related Hardware
      a. Provide built-in noise suppression devices which provide a high level of noise immunity on all solid-state hardware and devices.
      b. Provide power supplies with noise suppression devices.
      c. Isolate inputs from external devices (such as pushbuttons) with opto-isolation modules.
      d. Design control circuits with one leg of power supply grounded.
      e. Safety circuits shall not be affected by accidental grounding of any part of the system.
      f. System shall automatically restart when power is restored.
      g. System memory shall be retained in the event of power failure or disturbance.
      h. Equipment shall be provided with Electro Magnetic Interference (EMI) shielding within FCC guidelines.
4. Wiring: CSA labeled copper for factory wiring. Neatly route all wiring interconnections and securely attach wiring connections to studs or terminals.

5. Permanently mark components (relays, fuses, PC boards, etc.) with symbols shown on wiring diagrams.

6. Monitoring System Interface: Provide controller with serial data link through RJ45 Ethernet connection and install all devices necessary for monitoring function. Elevator contractor responsible to connect monitoring system interface to machine room monitoring compartment and LAN. Wiring from the LAN to the machine room monitoring compartment by others.

7. Provide controller or machine mounted auxiliary, lockable “open” disconnect if mainline disconnect is not in sight of controller and/or machine.

G. Sleeves and Guards: Provide 2” steel angle guards around cable or duct slots through floor slabs and/or walls. Provide rope and smoke guards for sheaves, cables, and cable slots in control room and secondary machinery levels.

H. Noise/Vibration Isolation: All elevator equipment including their supports and fastenings to building, shall be mechanically and electrically isolated from the building structure and main line power feeders to minimize objectionable noise and vibration transmission to car, building structure, or adjacent occupied areas of building.

I. Sound Isolation:
   1. Noise level relating to elevator equipment operation in machine room shall not exceed 80 dBA.
   2. All dBA readings shall be taken three (3) feet off the floor and three (3) feet from equipment using the “A” weighted scale.

J. Governor: Centrifugal-type, car driven with pull-through jaws and bi-directional shutdown switches. Provide required bracketing and supports for attachment to guide rail or machine support frame.

K. Emergency Brake: Provide means to prevent ascending car over-speed and unintended

2.05 HOISTWAY EQUIPMENT

A. Guide Rails: Planed steel T-sections for car and counterweight of suitable size and weight for the application including brackets for attachment to building structure. Provide rail backing and intermediate counterweight tie brackets to meet Code requirements. No additional structural points of rail attachment, other than those shown on the Contract Documents, will be provided.

B. Buffers, Car and Counterweight: Oil type with blocking and support channels. Provide switch on buffer to limit car speed if buffer is compressed.

C. Sheaves: Machined grooves and sealed bearings. Provide mounting means to machine beams, machine bedplate, car and counterweight structural members, or building structure.

D. Counterweight: Steel frame with metal filler weights.


F. Counterweight Guard: Metal guard in pit
G. Governor Rope and Encoder Tape Tensioning Sheaves: Mount sheaves and support frame on pit floor or guide rail. Provide frame with guides or pivot point to enable free vertical movement and proper tension of rope and tape.

H. Hoist and Governor Ropes:
1. 8 x 19 or 8 x 25 Seale construction, traction steel type. Fasten with staggered length, adjustable, spring isolated wedge type shackles.
2. Governor rope to suit Provider's specification.

I. Compensation: Provider's standard application. Pit mounted guide assembly shall provide quiet, effective restraint without excessive wear of components. Inhibit rubbing or chafing against hoistway or equipment within hoistway or pit. Application must meet performance/noise level requirement of specification.


K. Electrical Wiring and Wiring Connections:
1. Conductors and Connections: Copper throughout with individual wires coded and connections on identified studs or terminal blocks. Use no splices or similar connections in wiring except at terminal blocks, control compartments, or junction boxes. Provide 10% spare conductors throughout. Run spare wires from car connection points to individual elevator controllers in the machine room. Provide 4 pairs of spare shielded communication wires in addition to those required to connect specified items. Tag spares in machine room.
2. Conduit: Painted or galvanized steel conduit, EMT or duct. Conduit size, 1/2". Flexible heavy-duty service cord may be used between fixed car wiring and car door switches for door protective devices.
3. Traveling Cables: Flame and moisture-resistant outer cover. Prevent traveling cable from rubbing or chafing against hoistway or equipment within hoistway.
4. Auxiliary Wiring: Connect fire alarm initiating devices, emergency two-way communication system in each car controller in machine room.

L. Passenger Entrance Equipment:
1. Door Hangers: Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.
2. Door Tracks: Bar or formed, cold-drawn removable steel tracks with smooth roller contact surface.
3. Door Interlocks: Operable without retiring cam. Paint interlock box flat black.
4. Door Closers: Spring, spirator, or jamb/strut mounted counterweight type. Design and adjust to insure smooth, quiet mechanical close of doors.
5. Hoistway Door Unlocking Device: Provide unlocking device with escutcheon in door panel at all floors, with finish to match adjacent surface.
6. Hoistway Access Switches: Mount in wall at top and bottom floor(s). Provide switch with faceplate.

M. Vertical Freight Bi-Parting Doors - Entrance Equipment:
1. Door Guide Tracks: Continuous steel angles or formed steel tracks fastened to hoistway door jamb.
2. Door Guide Shoes: Machined iron shoes. Four shoes per door panel, with not less than 2-1/2" lateral contact per shoe.
3. Door Interlocks: Operable without retiring cam.
4. Hoistway Door Unlocking Device: Provide unlocking device with pull chain under hinged, lockable cover with stainless steel No. 4 finish at all floors.
N. Floor Numbers: Stencil paint 4” high floor designations in contrasting color on inside face of hoistway doors or hoistway fascia in location visible from within car.

2.06 HOISTWAY ENTRANCES

A. Complete entrances bearing fire labels from a nationally recognized testing laboratory approved within the governing jurisdiction.

B. Frames: 14 gauge hollow metal at all floors. Bolted and lapped head to jamb assembly at all floors. Provide Arabic floor designation/Braille plates, centered at 60” above finished floor, on both side jambs of all entrances. Provide plates at main egress landing with “Star” designation. For designated emergency car, provide “Star of Life” designation plates at height of 78” – 84” above finished floor on both side jambs at all floors. Braille indications shall be below Arabic floor designation. Provide cast floor designation/Braille plates as manufactured by SCS, Vision Mark, or Entrada.

C. Door Panels: Minimum 18 gauge steel, sandwich construction without binder angles. Provide leading edges of center-opening doors with rubber astragals. Provide a minimum of two (2) gibs per panel, one at leading and one at trailing edge with gibs in the sill groove entire length of door travel. Construct door panels with interlocking, stiffening ribs.

D. Sight Guards: Minimum 18 gauge steel, same material and finish as hoistway entrance door panels. Construct without sharp edges.

E. Sills: Extruded nickel silver

F. Sill Supports: Structural or formed steel designed to support door sill based upon car loading classification. Mount to eliminate need for grout under the sill.

G. Service Elevators: Provide 5” x 5” x 1/2” cold-rolled structural steel angle, extending full width of hoistway. Fasten to building structure at maximum 18” O.C.

H. Fascia, Toe Guards and Hanger Covers: Minimum 16 gauge furniture steel with black enamel. Provide full height fascia, toe guards, and hangar covers where rear entrances are not provided. Provide front and/or rear fascia for express hoistway travel.

I. Struts and Headers: Provide for vertical support of entrances and related material. Provide door open bumpers on entrances equipped with vertical struts.

2.07 CAR EQUIPMENT

A. Frame: Welded or bolted, rolled or formed steel channel construction to meet load classification specified.

B. Safety Device: Type “B,” flexible guide clamp.

C. Platform: Isolated type, constructed of steel, or steel and wood which is fireproofed on underside. Design and construct to accommodate load classification requirements. Provide Class “A” construction for passenger elevators, Class “A” construction for service elevator, Class “C” construction for freight elevator.

D. Platform Apron: Minimum 16 gauge steel, reinforced and braced to car platform with black enamel.
E. Guide Shoes: Roller type with three or more spring dampened, sound-deadening rollers per shoe. Maximum roller rotation speed, 350 r.p.m.

F. Sills: One piece extrusion with extruded extension between car entrance columns to face of car front return. Extruded extension to match finish of sill.

G. Doors: Provide as specified for hoistway entrance doors.

H. Door Hangers: Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.

I. Door Track: Bar or formed, cold-drawn removable steel track with smooth roller contact surface.

J. Door Header: Construct of minimum 12 gauge steel, shape to provide stiffening flanges.

K. Door Electrical Contact: Prohibit car operation unless car door is closed.

L. Door Clutch: Heavy-duty clutch, linkage arms, drive blocks and pickup rollers or cams to provide positive, smooth, quiet door operation.

M. Restricted Opening Device: Restrict opening of car door(s) outside unlocking zone.

N. Passenger / Service Door Operator: High speed, heavy-duty closed loop door operator capable of opening doors at no less than 2-1/2 f.p.s. Accomplish reversal in no more than 2-1/2" of door movement. Provide solid-state door control with closed loop circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Maintain consistent, smooth, and quiet door operation at all floors, regardless of door weight or varying air pressure.

Acceptable closed-loop door operators:

1. G.A.L. MOVFR
2. Elevator Components Industries ECI 2000
3. Motion Control Engineer SmarTraq
4. Original Equipment Manufacturers
   a. Major Manufacturers equipment may be substituted with documentation confirming strict adherence to Section 14215, 3.08, A, 1-9.
      1) KONE, Otis, ThyssenKrupp, Schindler

O. Passenger / Service Door Control Device:
1. Infrared Reopening Device: Black, fully enclosed device with full screen infrared matrix or multiple beams extending vertically along leading edge of each door panel to minimum height of 7'-0" above finished floor. Device shall prevent doors from closing and reverse doors at normal opening speed if beams are obstructed while doors are closing, except during nudge operation. In event of device failure, provide for automatic shutdown of car at floor level with doors open.
   a. Acceptable Infrared Reopening Device:
      1) Cegard/MAX-154 by CEDES
      2) Gatekeeper by Adams
      3) Lambda II by Otis
      4) Magic Edge by Tri-Tronics
      5) Microlite by ThyssenKrupp
6) Microscan E by T.L. Jones
7) Pana40 Plus by Janus

b. Acceptable Infrared 3D Reopening Device:
   1) Cegard/MAX-154 by CEDES
   2) Gatekeeper by Adams
   3) Lambda 3D by Otis
   4) Microlite 3D by ThyssenKrupp
   5) Pana40 Plus 3D by Janus

2. Nudging Operation: After beams of door control device are obstructed for a predetermined time interval (minimum 20.0 - 25.0 seconds), warning signal shall sound and doors shall attempt to close with a maximum of 2.5 foot pounds kinetic energy. Activation of the door open button shall override nudging operation and reopen doors.

3. Interrupted Beam Time: When beams are interrupted during initial door opening, hold door open a minimum of 3.0 seconds. When beams are interrupted after the initial 3.0 second hold open time, reduce time doors remain open to an adjustable time of approximately 1.0 - 1.5 seconds after beams are reestablished.

4. Differential Door Time: Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls.
   a. Car Call: Hold open time adjustable between 3.0 and 5.0 seconds.
   b. Hall Call: Hold open time adjustable between 5.0 and 8.0 seconds. Use hall call time when car responds to coincidental calls.

P. Car Operating Panel:
1. Car operating panel(s) without faceplate(s), consisting of a metal box containing vandal resistant operating fixtures, mounted behind the car swing front return panel(s).
2. Suitably identify floor buttons, alarm button, door open button, door close button and emergency push-to-call button with SCS, Visionmark, or Entrada cast tactile symbols recessed flush rear mounted. Configure plates per local building code accessibility standards including Braille. Locate operating controls no higher than 48" above the car floor; no lower than 35" for emergency push-to-call button and alarm button.
3. Provide minimum 3/4" diameter raised floor pushbuttons which illuminate to indicate call registration.
4. Provide alarm button to ring bell located on car. Illuminate button when actuated.
5. Provide keyed stop switch at bottom of car operating panel in locked car service compartment. Mark device to indicate “run” and “stop” positions.
6. Provide “door open” button to stop and reopen doors or hold doors in open position.
7. Provide “door close” button to activate door close cycle. Cycle shall not begin until normal door dwell time for a car or hall call has expired, except firefighters’ operation.
8. Provide “door hold” Button
9. Provide firefighters’ Phase II key switch with engraved instructions filled red. Include light jewel, audible signal, and call cancel button.
10. Install firefighters’ telephone jack with bezel matching adjacent controls if required.
11. Provide lockable service compartment with recessed flush door. Door material and finish shall match car return panel or car operating panel faceplate
12. Include the following controls in lockable service cabinet with function and operating positions identified by permanent signage or engraved legend:
   a. Inspection switch.
   b. Light switch.
   c. Three-position exhaust blower switch.
   d. Independent service switch.
   e. Constant pressure test button for battery pack emergency lighting.
   f. 120-volt, AC, GFCI protected electrical convenience outlet.
g. Card reader override switch.

h. Stop switch.

13. Provide black paint filled (except as noted), engraved, or approved etched signage as follows with approved size and font:
   a. Phase II firefighters’ operating instructions on main operating panel above corresponding keyswitch filled red.
   b. Car number on main and auxiliary car operating panel.
   c. “Certificate of Inspection on File in Building Office” on main car operating panel.
   d. “No Smoking” on main car operating panel.
   e. Car capacity in pounds on service compartment door.

Q. Car Top Control Station: Mount to provide safe access and utilization while standing in an upright position on car top.

R. Work Light and Duplex Plug Receptacle: GFCI protected outlet at top of car. Include on/off switch and lamp guard.

S. Communication System:
   1. “Push to Call,” two-way communication instrument in car with automatic dialing, tracking, and recall features with shielded wiring to car controller in control room. Provide dialer with automatic rollover capability with minimum two numbers.
      a. “Push to Call” button or adjacent light jewel shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase “PUSH TO CALL,” “HELP ON THE WAY” engraved signage adjacent to button.
      b. Provide “Push to Call” button tactile symbol, engraved signage, and Braille adjacent to button mounted integral with car front return panel.
   2. Firefighters’ telephone jack in car and firefighters’ panel, with four shielded wires to control room junction box. Jack bezel shall match adjacent controls if required.
   3. Install remote speaker(s) in car behind front return panel with drilled speaker pattern, with shielded wiring to control room junction box if required.

2.08 CAR ENCLOSURE

A. Car Enclosure Passenger Elevator: Provide complete as specified herein and/or detailed on architectural drawings. Provide the following features.
   1. Shell: Reinforced minimum 16 gauge furniture steel formed panels with baked enamel interior finish as selected. Apply sound-deadening mastic to exterior.
   2. Canopy: Reinforced 12 gauge furniture steel formed panels with lockable, hinged emergency exit. Interior finish white reflective baked enamel.
   3. Front Return Panels and Integral Entrance Columns: Reinforced minimum 16 gauge stainless steel satin finish. Swing entire unit on substantial pivot points (minimum 3) for service access to car operating panel(s). Locate pivot points to provide full swing of front return panel without interference with side wall finish or handrail. Secure in closed position with concealed three-point latch. Provide service compartment with recessed flush cover and cutouts for operating switches, etc.
   4. Entrance Columns: Reinforced minimum 16 gauge stainless steel satin finish.
   5. Transom: Reinforced minimum 16 gauge stainless steel satin finish full width of enclosure
   8. Interior Wall Finish: Removable panels, faced and edged, with color core plastic laminate. Color and finish as selected.
9. Ventilation: Two-speed type mounted to car canopy on isolated rubber grommets. Exhaust blower shall meet requirements of Item 2.04, F.

10. Lighting: Unless otherwise specified, provide fluorescent fixtures with wiring and hookup. Coordinate with emergency lighting requirements. Provide emergency lighting integral with portion of normal car lighting system. Include required transformer.

11. Handrails: Minimum 1-1/4” diameter stainless steel tubular grab bar across rear wall

B. Car Enclosure Service Elevator: Provide complete as specified herein. Provide the following features.

1. Shell: Reinforced minimum 16 gauge textured stainless steel formed panels as specified. Apply sound deadening mastic to exterior.

2. Canopy: Reinforced 12 gauge furniture steel formed panels with lockable hinged emergency exit. Interior finish white reflective baked enamel.

3. Front Return Panels: Reinforced minimum 16 gauge stainless steel, satin finish as specified.

4. Entrance Columns and Transom: Reinforced minimum 16 gauge, stainless steel, satin finish.

5. Car Door Panels: Reinforced minimum 18 gauge stainless steel textured finish as specified in Item 2.02. Same construction as hoistway door panels. Architectural metal cladding shall wrap around leading and trailing edge of panel and return a minimum of 1/2” on rear side of leading edge of panels.

6. Ventilation: Two-speed exhaust blower mounted to car canopy on isolating rubber grommets. Provide with a diffuser and grille. Exhaust blower shall meet requirements of Item 2.03, H.

7. Lighting: Fluorescent fixture flush mounted in ceiling with protective diffuser and steel guard over fixtures on car top.

8. Handrails/Guardrails: Two lines. Top handrail line minimum 1-1/4” diameter stainless steel tubular grab bar. Lower guardrail line 4” x 3/8” solid stainless steel flatstock bars mounted on both sides and rear of the car. Locate bottom guardrail line at 8” above car floor and handrail line at 32” above the car floor. Bolt rails through car walls from back and mount on 1-1/2” deep solid round stainless steel standoff spacers no more than 18” O.C. Return handrail/guardrail ends to car walls.

9. Finished Floor Covering: Rubber tile 1/8” thick with 1” diameter by 0.025” raised circular pattern.

C. Car Enclosure Freight Elevator: Provide complete as specified herein. Provide the following features.

1. Shell: Reinforced 10 gauge furniture steel formed panels no more than 20” wide with light-proof joints. Baked enamel finish as selected. Reinforce and brace panels to provide rigid structure and securely fasten to car sling and platform. Provide recess in car side wall for recessed mounting of car operating panel.

2. Canopy: Reinforced 12 gauge furniture steel formed panels no more than 20” wide with light-proof joints. Interior finish white reflective baked enamel. Provide hinged emergency exit.

3. Lighting: Recessed 4-tube fluorescent fixtures with on/off switch in car operating panel. Recess mount fixture flush with inside surface of car top. Provide steel guard on car top over fixture.

D. Bumper Rails: Two (2) rows of 2” x 12” oak or maple bumpers mounted on both sides and rear of the car. Locate bottom rail at floor level and top rail at 36” above the car floor. Bolt rails through car walls with bolt and captive nuts on exterior of wall panel sections.
2.09 HALL CONTROL STATIONS

A. Pushbuttons: Provide number of riser(s) with flush or surface mounted faceplates per architectural drawings. Include pushbuttons for each direction of travel which illuminate to indicate call registration. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency situation as part of faceplate. Pushbutton design shall match car operating panel pushbuttons.

B. Provide an illuminated signal marked “Elevator Emergency Power” to indicate emergency or standby power is in effect. If emergency power is present

C. Provide vandal resistant pushbutton and light assemblies.

2.10 SIGNALS

A. Passenger Car(s): Provide at each entrance to indicate travel direction of arriving car. Illuminate up or down LED lights and sound tone once for up and twice for down direction prior to car arrival at floor. Sound level shall be adjustable from 20 - 80 dBA measured at 5'-0" in front of hall control station and 3'-0" off floor. Illuminate light until the car doors start to close. Provide advanced hall lantern notification to comply with ADA hall call notification time. Car direction lenses shall be arrow shaped with faceplates. Lenses shall be minimum 2-1/2" in their smallest dimension. Provide vandal resistant lantern and light assemblies consisting of series of dots or lines for maximum visibility.

B. Car Position Indicator: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Locate fixture in each car operating panel. When a car leaves or passes a floor, illuminate indication representing position of car in hoistway. Illuminate proper direction arrow to indicate direction of travel. Provide multi-numeral vandal resistant indicator and light assemblies.

C. Faceplate Material and Finish: Stainless steel Satin finish all fixtures unless otherwise specified

D. Floor Passing Tone: Provide an audible tone of no less than 20 decibels and frequency of no higher than 1500 Hz, to sound as the car passes or stops at a floor served.

E. Voice Synthesizer: Provide electronic device with easily reprogrammable message and female voice to announce car direction, floor, emergency exiting instructions, etc.

F. Firefighters’ Control Panel: IF REQUIRED: Locate in building fire control room. Fixture faceplate, stainless steel satin finish, including the following features:
   1. Car position and direction indicator (digital-readout or color SVGA display type). Identify each position indicator with car number
   2. Indicator showing operating status of car.
   3. Manual car standby power selection switch(es) and power status indicators.
   4. Two-position firefighters’ emergency return switch(es) and indicators with engraved instructions filled red.
   5. Firefighters’ telephone jack.

Fixtures and monitor shall be located as directed by Architect / Owner. Where applicable, identify all indicators and manual switches with appropriate engraving. Provide wiring to control panel.
G. Firefighters’ Key Box: Flush-mounted box with lockable hinged cover. Engrave instructions for use on cover per Local Fire Authority requirements.

2.11 INTERCOM AND DISTRESS SIGNAL SYSTEM

A. Cars with a travel > 60'-0” require additional two way communication to master control panel for emergency personnel

B. General: Provide intercommunication system. Include all wiring between elevator hoistways and control panels.

C. Basic Equipment:
   1. Amplifier providing static-free voice transmission with adequate volume and minimum distortion at all stations, with pre-amplifier capable of receiving voice and music inputs from building and emergency building communication system.
   2. Activation of emergency building communication system overrides all other conversations and permits one-way conversation to all master stations in system.
   3. Master Stations:
      a. Speaker-microphone combination and/or handset for two-way communication.
      b. Selection buttons to enable communication with all master stations. Maintain continual reception of hands-free reply from station when a selected button is depressed.
      c. Two-Position “Talk/Listen” Button: Press to talk; release to listen.
      d. Illuminate “in use” light when any master station is being used.
      e. Reset button to make system available for use by any master station.
      f. Volume control knob for adjustment of incoming volume.
      g. Button to establish communications with all stations.
      h. Distress light in lobby panel which illuminates when “push to call” button, or alarm button in car is actuated. Energize distress light and buzzer or chime until intercom selection button for that car has been depressed. Sound buzzer or chime in lobby panel simultaneously with illumination of distress light.
   4. Remote Stations:
      a. Station in car shall be activated by “push to call,” two-way communication button. “Push to call” button shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase “PUSH TO CALL,” “HELP ON THE WAY” engraved signage adjacent to button. Provide “push to call” button tactile symbol, engraved signage, and Braille adjacent to button.
      b. Locate car microphone and speaker or transceiver/speaker combination in car canopy behind front return panel with drilled speaker pattern, with shielded wiring to control room junction box.

D. Station Housings:
   1. House master station at direction or owner in a metal compartment with baked enamel finish. Attach to the group elevator supervisory control panel or wall mount. Provide communication handset with 25'-0” long cord.
   2. Provide control center master intercoms with stainless steel satin finish faceplates and engraved operating instructions. Coordinate faceplate size and installation of units with building Console Supplier.

2.12 MONITORING CAPABILITIES

A. Elevator controls must be capable of being monitored by monitoring systems as determined by the University of Colorado Facilities Management
PART 3 EXECUTION

3.01 SITE CONDITION INSPECTION

A. Prior to beginning installation of equipment examine hoistway and control room areas. Verify no irregularities exist which affect execution of work specified.

B. Do not proceed with installation until work in place conforms to project requirements.

3.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver material in Contractor’s original unopened protective packaging.

B. Store material in original protective packaging. Prevent soiling, physical damage, or moisture damage.

C. Protect equipment and exposed finishes from damage and stains during transportation, erection, and construction.

3.03 INSTALLATION

A. Install all equipment in accordance with Contractor’s instructions, referenced codes, specification, and approved submittals.

B. Install control room equipment with clearances in accordance with referenced codes and specification.

C. Install all equipment so it may be easily removed for maintenance and repair.

D. Install all equipment for ease of maintenance.

E. Install all equipment to afford maximum accessibility, safety, and continuity of operation.

F. Remove oil, grease, scale, and other foreign matter from the following equipment and apply one coat of field-applied machinery enamel.

1. All exposed equipment and metal work installed as part of this work which does not have architectural finish.

2. Control room equipment, hoistway equipment including guide rails, guide rail brackets, and pit equipment.

3. Neatly touch up damaged factory-painted surfaces with original paint color. Protect machine-finish surfaces against corrosion.

3.04 FIELD QUALITY CONTROL

A. Work at jobsite will be checked during course of installation. Full cooperation with reviewing personnel is mandatory. Accomplish corrective work required prior to performing further installation.

B. Have Code Authority acceptance inspection performed and complete corrective work.

3.05 ADJUSTMENTS

A. Install rails plumb and align vertically with tolerance of 1/16” in 100’-0”. Secure joints without gaps and file any irregularities to a smooth surface.
B. Static balance car to equalize pressure of guide shoes on guide rails.

C. Lubricate all equipment in accordance with Contractor’s instructions.

D. Adjust motors, power conversion units, brakes, controllers, leveling switches, limit switches, stopping switches, door operators, interlocks, and safety devices to achieve required performance levels.

3.06 CLEANUP

A. Keep work areas orderly and free from debris during progress of project. Remove packaging materials on a daily basis.

B. Remove all loose materials and filings resulting from work.

C. Clean control room equipment and floor.

D. Clean hoistways, car, car enclosure, entrances, operating, and signal fixtures.

3.07 ACCEPTANCE REVIEW AND TESTS

A. Review procedure shall apply for individual elevators, portions of groups of elevators, and completed groups of elevators accepted on an interim basis or elevators and groups of elevators completed, accepted, and placed into operation.

B. Contractor shall perform review and evaluation of all aspects of its work prior to requesting Consultant’s final review. Work shall be considered ready for Consultant’s final contract compliance review when all Contractor’s tests are complete and all elements of work or a designated portion thereof are in place and elevator or groups of elevators are deemed ready for service as intended.

C. Furnish labor, materials, and equipment necessary for Consultant’s review. Notify Consultant a minimum of five (5) working days in advance when ready for final review of elevator or group.

D. Consultants’ written list of observed deficiencies of materials, equipment, and operating systems will be submitted to Contractor for corrective action. Consultant’s review shall include as a minimum:

1. Workmanship and equipment compliance with Contract Documents.
3. Performance of following is satisfactory:
   a. Starting, accelerating, running
   b. Decelerating, stopping accuracy
   c. Door operation and closing force
   d. Equipment noise levels
   e. Signal fixture utility
   f. Overall ride quality
   g. Performance of door control devices
   h. Operations of emergency two-way communication device
   i. Operations of firefighters’ service
4. Test Results:
   a. In all test conditions obtain specified contract speed, performance times, stopping accuracy without re-leveling, and ride quality to satisfaction of Purchaser and Consultant. Tests shall be conducted under both no load and full load condition.
   b. Temperature rise in motor windings limited to 50° Celsius above ambient. A full-capacity one (1) hour running test, stopping at each floor for ten (10) seconds in up and down directions, may be required.

E. Performance Guarantee: Should Consultant’s review identify defects, poor workmanship, variance or noncompliance with requirements of specified codes and/or ordinances, or variance or noncompliance with the requirements of Contract Documents, Contractor shall complete corrective work in an expedient manner to satisfaction of Purchaser and Consultant at no cost as follows:
   1. Replace equipment that does not meet code or Contract Document requirements.
   2. Perform work and furnish labor, materials, and equipment necessary to meet specified operation and performance.

F. A follow-up final contract compliance review shall be performed by Consultant after notification by Contractor that all deficiencies have been corrected. Provide Consultant with copies of the initial deficiency report marked to indicate items which Contractor considers complete.

3.08 PURCHASER’S INFORMATION

A. Provide three sets of neatly bound written information necessary for proper maintenance and adjustment of equipment within 30 days following final acceptance. Final retention will be withheld until data is received by Purchaser and reviewed by Consultant. Include the following as minimums:
   1. Straight-line wiring diagrams of “as-installed” elevator circuits with index of location and function of components. Provide one set reproducible master. Mount one set wiring diagrams on panels, racked, or similarly protected, in elevator control room. Provide remaining set rolled and in a protective drawing tube. Maintain all drawing sets with addition of all subsequent changes. These diagrams are Purchaser’s property.
      a. Provide one (1) electronic copy of all required documentation
   2. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.
   3. Lubrication instructions including recommended grade of lubricants.
   4. Parts catalogs for all replaceable parts including ordering forms, price lists and ordering instructions.
   5. Four sets of keys for all switches and control features properly tagged and marked.
   6. Diagnostic test devices together with all supporting information / documentation necessary for interpretation of test data, fault code interpretation, manufacturers acronym definitions, adjustment parameters, troubleshooting of elevator system, and performance of routine safety tests.
   7. The elevator installation shall be a design that can be maintained by any licensed elevator maintenance company employing journeymen mechanics, or University of Colorado qualified elevator maintenance personnel without the need to purchase or lease additional diagnostic devices, special tools, or instructions from the original equipment Contractor.
a. At the request of the University of Colorado, provide 8 hours of onsite controller diagnostic training to University of Colorado qualified elevator maintenance personnel.

b. Provide onsite capability to diagnose faults to the level of individual circuit boards and individual discrete components for the solid state elevator controller.

c. Provide a separate, detachable device, as required to the Purchaser as part of this installation if the equipment for fault diagnosis is not completely self-contained within the controller. Such device shall be in possession of and become property of the Purchaser.

d. Installed equipment not meeting this requirement shall be removed and replaced with conforming equipment at no cost to the Purchaser.

8. Provide software upgrades and/or revisions during progress of the work, warranty period and a term of 10 years from the date of substantial completion.

END OF SECTION