

AGREEMENT

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

THIS AGREEMENT, made this _____ day of _____, 2024, by and between the COUNTY OF LAKE, hereinafter called "OWNER" and Wright Contracting LLC, doing business as a corporation, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

- (1) The CONTRACTOR will commence and complete the Sheriff's Administration Facility Renovation Project, Bid No. 250816.
- (2) The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the project described herein.
- (3) The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within the time period required by the CONTRACT DOCUMENTS after the date of the Notice To Proceed and will complete the same within the time period required by the CONTRACT DOCUMENTS unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.
- (4) The issuance of a Notice to Proceed for the performance of work described in the CONTRACT DOCUMENTS is contingent upon the successful sale and issuance of lease revenue bonds by OWNER. OWNER shall provide written notification to CONTRACTOR upon successful sale of the bonds. Following such notification, OWNER shall issue the Notice to Proceed to CONTRACTOR in accordance with the contract terms and schedule.
- (5) The CONTRACTOR agrees to perform all of the work described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of Eleven Million Nine Hundred Sixty Five Thousand Dollars (\$11,965,000.00), as shown in the CONTRACTOR'S bid.
- (6) The term "CONTRACT DOCUMENTS" means and includes the following:
 - (A) AGREEMENT
 - (B) PROJECT MANUAL
 - (C) ADDENDA ACKNOWLEDGED
 - (D) CONTRACTOR'S BID FORM
 - (E) BIDDER'S BOND
 - (F) PREVAILING WAGE AND RELATED LABOR REQUIREMENTS CERTIFICATION
 - (G) LIST OF SUBCONTRACTORS
 - (H) NONCOLLUSION AFFIDAVIT
 - (I) PUBLIC CONTRACT CODE CERTIFICATIONS
 - (J) WORKERS' COMPENSATION PARTICIPATION CERTIFICATION
 - (K) LOCAL WORKFORCE PARTICIPATION CERTIFICATION
 - (L) PAYMENT BOND
 - (M) PERFORMANCE BOND
 - (N) CHANGE ORDERS

(7) The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

(8) This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement on the date first above written.

ATTEST: Susan Parker
Clerk of the Board

COUNTY OF LAKE

By: _____

By: _____
Chair, Board of Supervisors

APPROVED AS TO FORM:
Lloyd Guintivano
County Counsel

By: _____

CONTRACTOR

By: _____

Name: Mark Davis

Title: Owner and Principal

Mailing Address:

Wright Contracting
PO Box 1270, Santa Rosa, CA 95402

PROJECT MANUAL

FOR

Sheriff's Administration Facility
County of Lake, CA
County of Lake Project No. 250816



BID SUBMITTAL

Tuesday, November 5, 2024
11:00 A.M.

Lake County Public Services Department
333 Second Street, Lakeport, CA 95453

BID OPENING

Tuesday, November 5, 2024
11:30 A.M.

Lake County Courthouse Conference Room B
255 N. Forbes Street, Lakeport, CA 95453

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Original Construction Drawings, N.G. Armory – dated May 28, 1993 (Office of the State Architect, 71 pages).....	Attachment F
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DOCUMENT 00 11 13

ADVERTISEMENT FOR BIDS

1.1 PROJECT INFORMATION

- A. Notice is hereby given that the County of Lake will receive sealed bids for the following public project:

1.2 LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY PROJECT BID NO. 250816

A. Project Work:

1. The Project consists of renovation of existing 1-story building originally constructed in 1994. Demolition scope of work includes removal of existing partition, finishes, roof top mechanical equipment, electrical equipment. Plumbing fixtures and portion of existing parking stalls. Proposed scope of work includes adding a new second floor within existing structure, new building addition for elevator and supporting equipment room, seismic upgrade, fully automatic fire sprinkler system, new roof top mechanical equipment, new accessible public parking stalls, and secured parking lot. Approximately 20,323 SF on existing ground floor will include offices, breakroom briefing room, weapons room, interview rooms, evidence room with support spaces, storage, restrooms, locker rooms, and corridors. A new second floor with 3,496 SF of space will provide future office expansion and circulation area.
2. The Contractor shall furnish all labor, materials, parts, equipment, tools, supervision, services, transportation, waste disposal, facilities and other required items necessary to complete the following work in strict accordance with all of the Contract Documents.
3. The County has secured all required regulatory permits.
4. Unless otherwise indicated, all work must be performed between 7:00 a.m. and 4:30 p.m Monday through Friday except on Holidays.

B. Project Identification:

1. Lake County Sheriff's Administration Facility

C. Project Site:

1. 1431 Hoyt Avenue, Lakeport, CA 95453

D. Project Owner:

1. County of Lake, 255 North Forbes Street, Lakeport, CA 95453.

2. Owner's Representatives:

Lars Ewing

Public Services Director

Joseph Cooper

Capital Project Manager

333 Second Street
Lakeport CA 95453
Ph. 707-262-1618
Fax. 707-262-0973

- E. Project Time For Completion
1. The Contractor shall commence and complete work between December 17, 2004 and April 17, 2026.
- F. Engineer's Estimate of Construction Cost
1. \$16,056,485 Dollars.
- 1.3 CONTRACT DOCUMENTS, PRE-BID MEETING, QUESTIONS, SUBMITTAL AND OPENING
- A. Contract documents including plans and specifications can be viewed on the County website at:
- <http://www.lakecountycalifornia.gov/Bids.aspx>
- B. PREBID MEETING: A recommended (but not mandatory) pre-bid meeting and site visit will be held at 1431 Hoyt Avenue, Lakeport, CA 95453 on Tuesday, October 15, 2024 at 10:00 a.m., local time..
- C. Questions: Except for questions offered at the pre-bid meeting, questions about this bid package, including questions regarding plans and specifications, as well as omission, discrepancy, conflict, error, ambiguity or need for interpretation or clarification, shall be submitted no later than 5:00 p.m. on Tuesday, October 22, 2024, to facilities@lakecountycalifornia.gov. Answers to questions will be issued through official addendum by Tuesday, October 29 2024. Any interpretations, clarifications, correction of error or changes in requirements shall be issued in the form of an addendum.
- D. Bid Submittal: Owner will receive sealed lump sum bids until the bid time and date at the location given below. Owner will consider bids prepared in compliance with the Instructions to Bidders issued by Owner, and delivered as follows:
1. Bid Submittal Deadline: Tuesday, November 5, 2024, 11:00 a.m. local time.
 2. Bid Submittal Location: www.publicpurchase.com
 3. Bid Opening Time: Wednesday, November 5, 2024, 11:30 a.m. local time.
 4. Bid Opening Location: Lake County Courthouse, Conference Room B (First Floor), 255 N Forbes Street, Lakeport, CA 95453.
- Join <https://lakecounty.zoom.us/j/82465301977?pwd=mxR1Ggp2afxT7tCrBmjpKa07Bc3cxI.1> Meeting ID: 824 6530 1977 Passcode: 730574
- E. Bids will be thereafter publicly opened and read aloud.
- F. All bids shall be on the bid form provided by the County. Each bid must conform to and be responsive to all pertinent Contract Documents, including but not limited to, the Instructions to

Bidders Document, 00 21 13, and the Supplementary Instructions to Bidders – Local Hiring for Public Works Contracts, 00 22 19.

1.4 BONDS

- A. A Bid Bond by an admitted surety insurer on the form provided by the County, cash, or a cashier's check or a certified check, drawn to the order of the County of Lake, in the amount of five percent (5%) of the total bid price, shall accompany the Bid Form, as a guarantee that the Bidder will, within seven (7) calendar days after the date of the Notice of Award, enter into a contract with the County for the performance of the services as stipulated in the bid. Owner reserves the right to reject any and all bids and to waive informalities and irregularities.
- B. The successful Bidder shall be required to furnish a 100% Performance Bond and a 100% Payment Bond if it is awarded the contract for the Work.
- C. The successful Bidder may substitute securities for any monies withheld by the County to ensure performance under the Contract, in accordance with the provisions of section 22300 of the Public Contract Code.

1.5 INDUSTRIAL RELATIONS REQUIREMENTS

- A. The Contractor and all Subcontractors under the Contractor shall pay all workers on all work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the County, pursuant to sections 1770 et seq. of the California Labor Code. Prevailing wage rates are also available from the County or on the Internet at: <http://www.dir.ca.gov>.
- B. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The following requirements apply to this bid and contract:
 - 1. No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 17 25 .5.
 - 2. No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 17 25 .5.

1.6 DOCUMENTS

- A. Online Procurement and Contracting Documents: Obtain access by contacting any of the following locations
 - 1. <http://www.lakecountyca.gov/Bids.aspx>
 - 2. Construction Bidboard (Ebidboard)
11622 El Camino Real, #100
San Diego, CA 92130
Phone: 800-479-5314

Email: support@ebidboard.com

Website: www.ebidboard.com

3. Dodge Data & Analytics
830 Third Avenue, 6th Floor
New York, NY 10022
Phone: 877-784-9556
Email: support@construction.com
Website: www.construction.com
4. Humboldt Builders Exchange, Inc.
1213 5th Street
Eureka, California 95501
Phone: 707-442-3708
Website: www.humbx.com
Email: officemanager@humbx.com
5. Shasta Builders Exchange
5800 Airport Road
Redding, CA 96002
Phone: 530-221-5556
Email: info@shastabe.com
Website: www.shastabe.com
6. North Coast Builders Exchange
1030 Apollo Way
Santa Rosa, CA 95407
Phone: 707-542-9502
Fax: 707-542-2027
Website: www.ncbeonline.com
Email: planroom@ncbeonline.com
7. Marin Builders Association
660 Las Gallinas Avenue
San Rafael, CA 94903
Phone: 415-462-1220
Fax: 415-462-1225
Email: mba@marinbuilders.org
Website: www.marinba.org
8. Placer County Contractors Association & Builders Exchange

10656 Industrial Avenue, Suite 160

Roseville, CA 95678

Phone: 916-771-7229

Fax: 916-771-0556

Website: www.pccamembers.com

1.7 CONTRACT AWARD

- A. The County shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on the base bid amount only.

1.8 TIME OF COMPLETION

- A. Successful bidder shall begin the Work on receipt of the Notice to Proceed and shall complete the Work within the Project Time for Completion listed herein.

1.9 BIDDER'S QUALIFICATIONS

- A. To bid on this Project, the Bidder is required to possess one or more of the following State of California Contractor Licenses:
 - 1. General Building Contractor – Class B
- B. Bidders must be properly licensed under the laws governing their respective trades and be able to obtain insurance and bonds required for the Work.
- C. Bidders must provide Minimum Experience of Recently Completed Construction Projects and Client References
 - 1. Successful bidder must provide evidence of a minimum of Two (2) successfully completed commercial building construction projects with a construction contract amount exceeding \$3,000,000 dollars within the previous 5-year period.
 - 2. Bidder shall provide a Client Reference & contact information (Name, Company, Address, Phone, Email) for each of the referenced building projects.

END OF DOCUMENT 00 11 13

DOCUMENT 00 21 13

INSTRUCTIONS TO BIDDERS

1.1 Bidders shall follow the instructions in this document, and shall submit all documents, forms, and information required for consideration of a Bid. County will evaluate information submitted by the apparent low Bidder and, if incomplete or unsatisfactory to County, Bidder's bid may be rejected at the sole discretion of County.

A. Bid Receipt and Opening. County will receive sealed Bids from Bidders as stipulated in the Advertisement For Bids Document 00 11 13. Bids will be opened at or after the time indicated for receipt of bids. Bids for this Project will be received both electronically and by physical delivery. Bids physically delivered must be sealed, and marked with name and address of the Bidder and the Project Number, Bid number, Bid package, and time of bid opening. Bids will be received as indicated in the Notice to Bidders.

1. Mark envelopes with the name of the Project.
2. Bids must be submitted at the place and by date and time shown in the Instructions to Bidders.
3. Bids must contain all documents as required herein.

B. Preparation of Bid Proposal. The Proposal for this Contract contains a single Base Bid. The amount of the bid for comparison purposes will be the Base Bid. Bidders must submit Base Bids on Bid Form 00 41 13 and all other required County forms. Bids not submitted on the County's required forms shall be deemed non-responsive and shall not be considered. Additional sheets required to fully respond to requested information are permissible. Bidders must supply all information required by each Bid Document. Bids must be full and complete. County provides a bid submittal checklist, Form 00 43 93, for bidder's convenience. County reserves the right in its sole discretion to reject any Bid as non-responsive as a result of any error or omission in the Bid. Bidders must complete and submit all of the following documents with Bid:

1. Bid Bond (or other security) 00 43 13
2. Designated Subcontractors List 00 43 36
3. Non-Collusion Affidavit 00 45 13

Where the Bid for the work is to be submitted on a unit price basis, unit prices will be accepted on all items of work set forth in the Bid, except those designated to be paid for as a lump sum. The estimate of quantities of work to be done is tabulated in the Bid and, although stated with as much accuracy as possible, is approximate only and is assumed solely for the basis of calculation upon which the award of Contract shall be made. Payment to the Contractor will be made on the measurement of the work actually performed by the Contractor as specified in the Contract Documents. The Owner reserves the right to increase or diminish the amount of any class of work as may be deemed necessary.

When the Bid for the work is to be submitted on a lump sum basis, a single lump sum price shall be submitted in the appropriate place. The total amount to be paid the Contractor shall be the amount of the lump sum in the Bid. After award of Contract, the Contractor may be required to break down the lump sum Bid into unit prices for the various portions to be completed.

C. Bid Award. County shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on the criteria as indicated in these contract documents for the Base Bid. A responsive bid is a solicited bid that has been determined by the County to be in conformance with the conditions, completion or delivery requirements, and specifications

detailed in the solicitation for bid. Responsive bids are those submitted on time; contain complete information, and required submittals and/or supporting documentation.

A responsible bidder is defined by the California Public Contract Code section 1103 as "a bidder who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily perform this public works contract."

Prior to the award of Contract, County reserves the right to consider the responsibility of the Bidder. County may conduct investigations as County deems necessary to assist in the evaluation of any bid and to establish the responsibility, including, without limitation, qualifications and financial ability of Bidders, proposed subcontractors, suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to County's satisfaction within the prescribed time.

- D. Award of Additive Alternate Bid (if any). A decision to award the Additive/Deductive Alternate bid(s) will be awarded at the County's discretion and will be awarded to the same party to whom is awarded the Base Bid
- E. Bid Deposit. Bidders must submit with their Bids: cash; a cashier's check (or a certified check) payable to County; or a Bid Bond, of not less than five percent (5%) of amount of base Bid, plus all additive alternates. Required form of corporate surety, Bid Security Form, is provided by County and must be used and fully completed by Bidders choosing to provide a Bid Bond as security. The Surety on Bidder's Bid Bond must be an insurer admitted in the State of California and authorized to issue surety bonds in the State of California. Bids submitted without necessary bid security will be deemed non-responsive and will not be considered. Attorneys-in-fact who sign BID BONDS or payment BONDS and performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney. If Bidder to whom Contract is awarded shall for TEN (10) calendar days after the date of the Notice of Award, fail or neglect to submit required bonds, insurance certificates, and all other required documents, the County may, at its option, determine that the bidder has abandoned the contract, and thereupon this bid and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this bid shall operate and the same shall be the property of the County. The County may then deposit Bid Bond, cash, cashier's check, or certified check for collection, and proceeds thereof may be retained by County as liquidated damages for failure of Bidder to enter into Contract, in the sole discretion of County. It is agreed that calculation of Damages County may suffer as a result of Bidder's failure to enter into the Contract would be extremely difficult and impractical to determine and that the amount of the Bidder's required bid security shall be the agreed and conclusively presumed amount of damages.
- F. Insurance: Insurance requirements are detailed in the "Lake County General Conditions" hereinbelow.
- G. Subcontractor List. Bidders must submit with the Bid the Designated Subcontractors List for those subcontractors who will perform any portion of Work, including labor, rendering of service, or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one half of one percent (0.5%) of total Bid. Failure to submit this list when required by law shall result in Bid being deemed non-responsive and the Bid will not be considered.
- H. Addenda. County will transmit to all prospective Bidders of record such Addenda as County in its discretion considers necessary in response to questions received by the Project Coordinator including questions arising at the pre-bid meeting/site visit. Oral statements shall not be relied upon and will not be binding or legally effective. Addenda issued by the County as a result of the pre-bid meeting/site visit, if any shall constitute the sole and exclusive record and statement

of the results of the pre-bid meeting/site visit. Questions received less than TEN (10) business days prior to the date for opening Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Addenda may also be issued to modify other parts of the Contract Documents as deemed advisable by County. Each Bidder must acknowledge each Addendum in its Bid Form 00 41 13 by number or its Bid shall be considered non-responsive. Addenda shall be part of the Contract Documents. A complete listing of Addenda may be secured from County.

- I. Non-Collusion Affidavit. Bidders shall submit the Non-Collusion Affidavit with their Bids. Bids submitted without the Non-Collusion Affidavit shall be deemed non-responsive and will not be considered.
- J. Bid Form Erasures, Deletions and Discrepancies. Bids shall be clearly written without erasure or deletions. County reserves the right to reject any Bid containing erasures or deletions. Discrepancies between written words and figures, or words and numerals, will be resolved in favor of the figures or numerals.
- K. Bid Form Modification. Bidders shall not modify Bid Form 00 41 13 or qualify their Bids. Bidders shall not submit to the County a scanned, re-typed, word-processed, or otherwise recreated version of Bid Form 00 41 13 or other County-provided document. A conditional or qualified BID will not be accepted if it modifies the Plans or Specifications or method of work. All blank spaces in the Bid Form must be filled in, in ink, in both words and figures where required. No changes shall be made in the phraseology of the forms.
- L. Prevailing Wages. The successful Bidder and all its subcontractors shall pay all workers on all work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the County, pursuant to sections 1770 et seq. of the California Labor Code. Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are available upon request at the Lake County Public Services office, 333 Second Street, Lakeport, CA. Prevailing wage rates are also available on the internet at <http://www.dir.ca.gov>.
- M. Complete Contract Documents. It shall be the responsibility of the Bidder to verify the completeness of its set of Contract Documents from the Table of Contents therein and neither the County of Lake nor any of its officers or consultants shall be held responsible for any omissions unless such omission has been called to the attention of the County of Lake prior to the submission of bids.
- N. Project Understanding. Submission of Bid signifies careful examination of Contract Documents and complete understanding of the nature, extent, and location of Work to be performed. Bidders must complete the tasks listed below as a condition to bidding, and submission of Bid shall constitute the Bidder's express representation to County that Bidder has fully completed the following:
 - 1. Bidder has visited the Site and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions and federal, state and local laws, and regulations that in any manner may affect cost, progress, performance, or furnishing of Work or that relate to any aspect of the means, methods, techniques, sequences, or procedures of

- construction to be employed by Bidder and safety precautions and programs incident thereto;
2. Bidder has conducted or obtained and has understood all examinations, investigations, explorations, tests, reports, and studies that pertain to the subsurface conditions, as-built conditions, underground facilities, and all other physical conditions at or contiguous to the Site or otherwise that may affect the cost, progress, performance, or furnishing of Work, as Bidder considers necessary for the performance or furnishing of Work at the Contract Sum, within the Contract Time, and in accordance with the other terms and conditions of Contract Documents, including specifically the provisions of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies, or similar information or data are or will be required by Bidder for such purposes;
 3. Bidder has correlated its knowledge and the results of all such observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Contract Documents;
 4. Bidder has given County prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and the actual conditions, and the written resolution thereof by County is acceptable to Bidder;
 5. Bidder has made a complete disclosure in writing to County of all facts bearing upon any possible interest, direct or indirect, that Bidder believes any representative of County or other officer or employee of County presently has or will have in this Contract or in the performance thereof or in any portion of the profits thereof;
 6. Bidder must, prior to bidding, perform the work, investigations, research, and analysis required by this document and that Bidder represents in its Bid Form 00 41 13 and the Agreement that it performed prior to bidding. Bidders are charged with all information and knowledge that a reasonable bidder would ascertain from having performed this required work, investigation, research, and analysis. Bid prices must include entire cost of all work "incidental" to completion of the Work.
 7. Conditions Shown on the Contract Documents: Information as to underground conditions, as-built conditions, or other conditions or obstructions, indicated in the Contract Documents, e.g., on Drawings or in Specifications, has been obtained with reasonable care, and has been recorded in good faith. However, County only warrants, and Bidder may only rely, on the accuracy of limited types of information.
 - a. As to above-ground conditions or as-built conditions shown or indicated in the Contract Documents, there is no warranty, express or implied, or any representation express or implied, that such information is correctly shown or indicated. This information is verifiable by independent investigation and Bidder is required to make such verification as a condition to bidding. In submitting its Bid, Bidder shall rely on the results of its own independent investigation. In submitting its Bid, Bidder shall not rely on County-supplied information regarding above-ground conditions or as-built conditions.
 - b. As to any subsurface condition shown or indicated in the Contract Documents, Bidder may rely only upon the general accuracy of actual reported depths, actual reported character of materials, actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated. County is not responsible for the completeness of such information for bidding or construction; nor is County responsible in any way for any conclusions or opinions of Bidder drawn from such information; nor is County responsible for subsurface conditions that are not specifically shown (for example, County is not responsible for soil conditions in areas contiguous to areas where a subsurface condition is shown).
 8. Conditions Shown in Reports and Drawings Supplied for Informational Purposes: Reference is made to the Asbestos Analytical Data Report included in Exhibit A.
 - a. These reports and drawings are not Contract Documents and, except for any "technical" data regarding subsurface conditions specifically identified in

Geotechnical Data and Existing Conditions Information, and underground facilities data, Bidder may not in any manner rely on the information in these reports and drawings. Subject to the foregoing, Bidder must make its own independent investigation of all conditions affecting the Work and must not rely on information provided by County.

- O. Substitutions. Bids shall be based on products and systems specified in Contract Documents or listed by name in Addenda. County is not responsible and/or liable in any way for a Bidder's damages and/or claims related, in any way, to that Bidder's basing its bid on any requested substitution that County has not approved. Bidders and materials suppliers who submit requests for substitutions prior to the award of the Contract must do so in writing and in compliance with Public Contract Code section 3400. All requests must comply with the following:
1. County must receive any request for substitution a minimum of TEN (10) business days prior to bid opening.
 2. Requests for substitutions shall contain sufficient information to assess acceptability of product or system and impact on Project, including, without limitation, the requirements specified in the Special Conditions and the Specifications. Insufficient information shall be grounds for rejection of substitution.
 3. Approved substitutions shall be listed in Addenda. County reserves the right not to act upon submittals of substitutions until after bid opening.
 4. Substitutions may be requested after Contract has been awarded only if indicated in and in accordance with requirements specified in the Special Conditions and the Specifications.
- P. Alternates. This Contract may include alternates. Alternates are defined as alternate products, materials, equipment, systems, methods, or major elements of the construction that may, at the County's option and under terms established in the Contract and pursuant to section 20 10 3.8 of the Public Contract Code, be selected for the Work.
- Q. Time for Completion: County may issue a Notice to Proceed within NINETY (90) calendar days from the date of the Notice of Award. Once Contractor has received the Notice to Proceed, Contractor shall complete the Work within the period of time indicated in the Contract Documents.
1. In the event that County desires to postpone issuing the Notice to Proceed beyond the 90-day period above, it is expressly understood that with reasonable notice to the Contractor, County may postpone issuing the Notice to Proceed.
 2. It is further expressly understood by Bidder that Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of the issuance of the Notice to Proceed beyond the 90-day period. If the Contractor believes that a postponement of issuance of the Notice to Proceed will cause a hardship to the Contractor, the Contractor may terminate the Contract. Contractor's termination due to a postponement beyond this 90-day period shall be by written notice to County within TEN (10) calendar days after receipt by Contractor of County's notice of postponement.
 3. It is further understood by Bidder that in the event that Contractor terminates the Contract as a result of postponement by County, County shall only be obligated to pay Contractor for the Work that Contractor had performed at the time of notification of postponement and which County had in writing authorized Contractor to perform prior to issuing a Notice to Proceed.
 4. Should the Contractor terminate the Contract as a result of a notice of postponement, County shall have the authority to award the Contract to the next lowest responsive responsible bidder.

- R. Contract Documents. The Bidder to whom Contract is awarded shall execute and submit the following documents by 5:00 p.m. of the SEVENTH (7TH) calendar day following the date of the Notice of Award. Failure to properly and timely submit these documents entitles County to reject the bid as non-responsive.
1. Agreement: To be executed by successful Bidder. Submit two (2) copies, each bearing an original signature.
 2. Performance Bond (100%): On the form provided in the Contract Documents and fully executed as indicated on the form.
 3. Payment Bond (100%) (Contractor's Labor and Material Bond): On the form provided in the Contract Documents and fully executed as indicated on the form.
 4. Insurance Certificates and Endorsements as required.
 5. Workers' Compensation Certification.
 6. Prevailing Wage and Related Labor Requirements Certification.
 7. Hazardous Materials Certification (if needed).
 8. Contractor's Safety Plan specifically adapted for the Project.
- S. Bid Protests:
1. Any party with a direct financial interest who is aggrieved by any alleged material irregularity in connection with the intended award of a bid, may file a bid protest with the Purchasing Agent, where such protest is based on alleged violations of Federal, State, or local law or ordinance, or alleged material irregularity in either the County's bid invitation or in the bid to which an award is intended. Generally, non-material irregularities in a bid response are those that substantially conform to the bid requirements and do not affect the bid price, time or conditions in such a way as to affect the amount of the bid or provide a competitive advantage or benefit not allowed to other bidders. Material irregularities in a bid invitation provide a competitive advantage or benefit to one (1) bidder that is not enjoyed by other bidders. The Purchasing Agent may determine whether an alleged irregularity exists and whether it is material or non-material and shall have the authority to waive non-material irregularities. A bid protest must:
 - a. Be written
 - b. State the specific alleged violation of law or alleged material irregularity
 - c. Request a determination of the appeal
 - d. Provide a telephone number and email address at which the appellant can be contacted
 - e. Be filed no later than seven (7) days after the date of the Notice of Intent to Award Letter and/or formal Bid Opening (holidays excepted). Any protest filed after this time will not be considered.
 2. The party filing the appeal ("appellant") must concurrently transmit a copy of all appeal documents and any attachments to all other parties with a direct financial interest which may be adversely affected by the determination of the appeal.
 3. Within seventy-two (72) hours of receipt of appeal, the Purchasing Agent or Assistant Purchasing Agent shall provide written notification to the appellant of the determination. A determination under this procedure shall be final except that the Purchasing Agent's decision may be appealed to the County Administrative Officer in writing within forty-eight (48) hours from the Purchasing Agent's or Assistant Purchasing Agent's notification to appellant.
 4. The decision of the County of Lake respecting the amount of a bid, or the existence or treatment of an irregularity in a bid, shall be final.
- T. Bid Rejection. County reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional bids, to re-bid, and to reject the bid of any bidder if County believes that it would not be in the best interest of County to make an award to that bidder, whether because the bid is not responsive or the bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard

or criteria established by County. For purposes of this paragraph, an "unbalanced bid" is one having nominal prices for some work items and/or enhanced prices for other work items

- U. Waivers. County also reserves the right to waive inconsequential deviations not involving price, time, or changes in the Work.
- V. Limitations. This Request for Proposals does not commit the County to award a contract, pay any costs incurred in the preparation of the Bids in response to this request, or to procure or contract for services. County expressly reserves the right to reject any and all proposals or to waive any irregularity or information in any proposals or in the RFP procedure and to be the sole judge of the responsibility of any proposer and/or services to be rendered. County reserves the right to withdraw this RFP at any time without prior notice. Further, County reserves the right to modify the RFP schedule described herein. The County does not guarantee, either expressly or by implication that any work or services will be required, or any contract will be issued as a result of this RFP.

END OF DOCUMENT 00 21 13

DOCUMENT 002219

LOCAL HIRING FOR PUBLIC WORKS CONTRACTS

- 1.1 The purpose of this section is to encourage contractors who receive County public works contracts to hire residents of Lake County.
- 1.2 Definitions.
 - A. *Awarding Authority* means those individuals authorized to approve a contract or purchase order in accordance with the limitations established in this section.
 - B. *Contractor* means any legally qualified person or entity, which, pursuant to a written agreement or purchase order, provides labor on public projects for the County.
 - C. *Days* means calendar days unless otherwise specified.
 - D. *Public project* means a project of public works improvement which is let by contract pursuant to provisions of 22032 et seq. of the Public Contract Code.
 - E. *Construction labor force* means those persons who are performing their work on the actual site of the public project.
 - F. *Resident of Lake County* means an individual domiciled within the boundaries of Lake County at the time immediately preceding the advertisement of the bid for a project, who can verify him or her domicile upon request of the contractor or County by producing documentation such as a rent/lease agreement, telephone and utility bills, a valid California driver's license or identification card, or other similar reliable evidence that verifies that the individual is domiciled in Lake County.
 - G. *Qualified local person* means a resident of Lake County who is specially trained, skilled, experienced and licensed (if required) in the work, trade, or craft specified for the portion of the public work of improvement to be performed.
 - H. *Local workforce* means qualified local persons who are working on the construction labor force.
- 1.3 Local Hiring Goals—Local Workforce Participation Discount.
 - A. Unless such provision would conflict with a state or federal law or regulation applicable to a particular contract for a public works project, all County contracts for public works projects shall provide that a discount, as specified hereinafter, shall be applied to any contractor's bid which voluntarily meets the County's local workforce participation goals as provided hereinbelow:
 1. Bid solicitations for public projects which include a certification of thirty (30) percent local workforce participation of contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive five (5) percent bid discount.
 2. Bid solicitations for public projects which include a certification of twenty-five (25) percent local workforce participation of contractor's total construction labor force,

- including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive four (4) percent bid discount.
3. Bid solicitations for public projects which include a certification of twenty (20) percent local workforce participation of contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive three (3) percent bid discount.
 4. Bid solicitations for public projects which include a certification of fifteen (15) percent local workforce participation of contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive two (2) percent bid discount.
 5. Bid solicitations for public projects which include a certification of ten (10) percent local workforce participation of contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive one (1) percent bid discount.
 6. Notwithstanding the foregoing bid discounts, in no instances shall the total dollar amount of any said bid discount exceed fifty thousand dollars (\$50,000.00).
- B. For the purpose of calculating whether a contractor's construction labor force is comprised of qualified local persons, such persons whose primary residence or business address is outside of California shall not be included in the calculation.
- C. Discounts are solely a means to establish to whom the bid is awarded and shall not impact the bid or contract amount.
- D. Contractor shall retain ultimate discretion to hire, discharge or reject its employees and subcontractors.
- 1.4 Required Documentation
- A. During the performance of the contract, the contractor shall keep and provide to the Awarding Authority, an accurate and certifiable record on a standardized form(s) acceptable by the County, an accurate and certifiable record that shows the name, residence address, trade classification, hours employed, per diem wages and benefits of each person employed by the contractor and the contractor's subcontractors, on the specific public project, including full-time, part-time, apprentices, permanent and temporary employees. All such records must have an original signature and be signed by an authorized officer of the company under penalty of perjury. Contractor shall make contractor's and subcontractor's records available to the County, upon request, within five (5) working days.
- 1.5 Bid Requirements.
- A. Certification of Voluntary Local Workforce Participation. Every bidder who wishes to obtain a local workforce discount off the bid price must complete and sign under penalty of perjury a Certification of Voluntary Local Workforce Participation, Form 00 45 50 which must be submitted no later than the time bids are due.
- B. Prior to submitting a bid, bidder shall ensure that any and all subcontractors listed in its bid are not currently debarred nor have been declared an Irresponsible Bidder pursuant to County Code [Section 2-44](#) within the last twelve (12) months. Prospective contractors may consult the list, available from the Purchasing Agent, of contractors and subcontractors, if any, who are currently disqualified.

1.6 Nonresponsive Bids

- A. The Awarding Authority may declare a bid to be nonresponsive under the provisions of this article for good cause including, but not limited to, the following circumstances:
 - 1. If a bidder or a subcontractor listed by the bidder is currently debarred or has been declared an Irresponsible Bidder pursuant to [Section 2-44](#) of the County Code within the last twelve (12) months.
 - 2. If a bidder claims to be eligible for a local workforce discount but fails to provide Certification of same at the time of submission of his/her bid package.

1.7 Rescinding Bid Award

- A. Subsequent to bid award but prior to contract approval by the Awarding Authority, the County may rescind the bid award if upon investigation, it determines that reasonable evidence exists to indicate a contractor whose bid was discounted as a result of a Certification of Voluntary Local Workforce Participation will fail to perform the contract in accordance with that Certification. Any such determination shall be made only after consultation with the County Administrative Officer or his/her designee and shall result in issuance of written findings which may include a declaration of irresponsibility and may disqualify the contractor from bidding or being listed in any bid on any County contract for a public project or a reasonable period, provided however, that the contractor may appeal the determination to the Board of Supervisors

1.8 Use of Apprentices

- A. A contractor's use of Lake County residents as apprentices on a County public works project in accordance with Section 1777.5 of the California Labor Code may be included in the calculation to determine eligibility for a local work force discount but may not exceed the ratios provided in Section 1777.5.
- B. Prior to commencement of work the prime contractor shall submit a plan acceptable to the Awarding Authority which outlines how the apprenticeship requirements will be met by all contractors working on the project.
- C. At any time during the term of the contract and for a period of thirty (30) days thereafter, the prime contractor shall, within five (5) days of request by the Awarding Authority, provide evidence of compliance with Section 1777.5.

1.9 Reduction of Certified Local Workforce Participation

- A. The Awarding Authority reserves the right to reduce the contractor's certified local workforce participation during construction period when the Awarding Authority determines there is high impracticality of complying therewith for particular subcontracts. High impracticality may be evidenced by serious unforeseen circumstances, new government regulations, national or natural disasters and other events that the Awarding Authority may reasonably determine.

END OF DOCUMENT 00 22 19

SECTION 00 41 13

PART 1 -

BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Lake County Sheriff's Administration Facility
- C. Project Location: 1431 Hoyt Avenue, Lakeport, CA 95453
- D. Owner: County of Lake
- E. Owner Project Number: 250816

1.2 CONSTRUCTION BID WORKSHEET

CONSTRUCTION BID WORKSHEET - BID NO. 250816					
LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY					
Item No.	Description	Unit	Estimated Quantity	Unit Cost	Amount
1	Lump Sum Base Bid (Total)	LS	1		
2	CSI - Divisions 00 & 01 – GENERAL REQUIREMENTS (Base Bid Breakout, typical)	LS	1		
3	CSI – Division 02 – EXISTING CONDITIONS	LS	1		
4	CSI – Division 03 – CONCRETE	LS	1		
5	CSI – Division 04 - MASONRY	LS	1		
6	CSI – Division 05 - METALS	LS	1		
7	CSI – Division 06 – WOOD, PLASTICS, AND COMPOSITES	LS	1		
8	CSI – Division 07 – THERMAL & MOISTURE PROTECTION	LS	1		

9	CSI – Division 08 - OPENINGS	LS	1		
10	CSI – Division 09 - FINISHES	LS	1		
11	CSI – Division 10 - SPECIALTIES	LS	1		
12	CSI – Division 12 - FURNISHINGS	LS	1		
13	CSI – Division 13 – SPECIAL CONSTRUCTION	LS	1		
14	CSI – Division 14 – CONVEYING EQUIPMENT	LS	1		
15	CSI – Division 21 – FIRE SUPPRESSION	LS	1		
16	CSI – Division 22 - PLUMBING	LS	1		
17	CSI – Division 23 – HEATING, VENTILATING, AND AIR CONDITIONING	LS	1		
18	CSI – Division 26 - ELECTRICAL	LS	1		
19	CSI – Division 27 - COMMUNICATIONS	LS	1		
20	CSI – Division 28 – ELECTRONIC SAFETY AND SECURITY	LS	1		
21	CSI – Division 31 - EARTHWORK	LS	1		
22	CSI – Division 32 – EXTERIOR IMPROVEMENTS	LS	1		
23	CSI – Division 33 - UTILITIES	LS	1		
24	Add Alternate #1 – Elevator Maintenance Ser- vice Contract – 12 Months	LS	1		
25	Add Alternate #2 – Elevator Maintenance Ser- vice Contract – 60 Months	LS	1		
26	Add Alternate #3 – Solar / PV Parking Canopies (per pending Bid Addendum)	LS	1		

27	Minimum Qualification – Completed Project #1: Project Name: Contract Value: Completion Date: Client Reference: Company: Email: Phone:				NA
28	Minimum Qualification – Completed Project #2: Project Name: Contract Value: Completion Date: Client Reference: Company: Email: Phone:				NA
29	General Contractor's Compensable Daily Rate times 30 Days = Provide Dollar Amount (Re- quested Information Only / Excluded from Base Bid Value)	LS	1		

1.3 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Owner, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

_____ Dollars
(\$ _____)

1.4 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within Seven (7) days after a written Notice of Award and on failure

to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:

_____ Dollars
(\$_____).

1.5 TIME OF COMPLETION

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Owner, and shall fully complete the Work between December 17, 2024 and April 17, 2026

1.6 ACKNOWLEDGMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated _____.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.

1.7 CONTRACTOR'S LICENSE

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in California, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.8 SUBMISSION OF BID

- A. Respectfully submitted this ____ day of _____, 2024
- B. Submitted By: _____ (Name of bidding firm or corporation)
- C. Authorized Signature: _____ (Handwritten signature)
- D. Signed By: _____ (Type or print name)
- E. Title: _____ (Owner/Partner/President/Vice President)
- F. Witnessed By: _____ (Handwritten signature)
- G. By: _____ (Type or print name)
- H. Title: _____ (Corporate Secretary or Assistant Secretary)
- I. Street Address: _____

J. City, State, Zip: _____

K. Phone: _____

L. License No.: _____

M. Federal ID No.: _____ (Affix Corporate Seal Here)

END OF DOCUMENT 00 41 13

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE _____

_____ as Principal,

and _____, as surety,

are held and firmly bound unto the County of Lake in the penal sum of five percent (5%) of the total amount of the bid of the Principal above named, submitted by said Principal to the County of Lake for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the County of Lake to which said bid was submitted, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. In no case shall the liability of the surety hereunder exceed the sum of \$ _____.

The condition of this obligation is such that, whereas the Principal has submitted the above-mentioned bid to the County of Lake, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at Lakeport, California, for the Sheriff's Administration Facility Project, Bid No. 250816.

NOW, THEREFORE, if the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files two bonds with the County of Lake, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____ day of _____, A.D. 2024.

_____(Seal)

_____(Seal)

_____(Seal)

PRINCIPAL

_____(Seal)

_____(Seal)

SURETY

ADDRESS _____

END OF DOCUMENT 00 43 13

PREVAILING WAGE AND
RELATED LABOR REQUIREMENTS CERTIFICATION

PROJECT/CONTRACT NO.: Lake County Sheriff's Administration Facility, Project No.
250816, between the County of Lake, California, (the "County") and _____
_____ (the "Contractor")

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hours' notice, payroll records, and apprentice and trainee employment requirements, for all Work on the Project including, without limitation, the requirement that Contractor and all of its Subcontractors are registered pursuant to Labor Code section 1771, et seq.

Date: _____

Proper Name of Contractor: _____
/ Subcontractor

Signature: _____

Print Name: _____

Title: _____

THIS FORM MUST BE COMPLETED BY THE CONTRACTOR AND ALL SUBCONTRACTORS

END OF DOCUMENT

LIST OF SUBCONTRACTORS

The bidder certifies that:

- A. ☐ I **do not** intend to subcontract any work on this project.
- B. ☐ I **do** intend to subcontract portions of the work on this project.

NOTE: The bidder shall check box A or box B. If the bidder does not check a box, it will be deemed that he has checked box A.

If awarded the Contract, the bidder proposes to employ the following subcontractors who will perform work or labor or render service, to the bidder in or about the work in an amount in excess of one-half of one percent (0.5%) of the total amount of bidder's proposal or \$10,000, whichever is greater. Listing of subcontractors is mandatory under Sections 4100-4108 of the Public Contract Code. If no subcontract work is proposed, except within the one-half of one percent (0.5%) or \$10,000 limit set forth, the bidder shall so state.

Name of Sub Contractor	Address of Sub Contractor	Subcontractor License No.	Subcontractor DIR No.	Phone #	Description of work that Subcontractor will provide

DOCUMENT 00 43 93

PART 1 -

BID SUBMITTAL CHECKLIST

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Prime Contract: _____.
- C. Project Name: Lake County Sheriff's Administration Facility
- D. Project Location: 1431 Hoyt Avenue, Lakeport, CA 95453
- E. Owner: County of Lake
- F. Owner Project Number: 250816

1.2 BIDDER'S CHECKLIST

- A. In an effort to assist the Bidder in properly completing all documentation required, the following checklist is provided for the Bidder's convenience. The Bidder is solely responsible for verifying compliance with bid submittal requirements.
- B. Attach this completed checklist to the outside of the Submittal envelope.
 - 1. Bid Form
 - 2. Bid Bond
 - 3. Power-of-Attorney (if required)
 - 4. Addenda Acknowledged
 - 5. Subcontractor List
 - 6. Contractor's License Number and Class Provided
 - 7. Noncollusion Affidavit
 - 8. Voluntary Local Workforce Participation Certification (if applicable)

END OF DOCUMENT 00 43 93

SECTION 00 45 13

PART 1 -

NONCOLLUSION AFFIDAVIT

**NONCOLLUSION AFFIDAVIT
(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH
BID)**

The undersigned declares that he or she is the _____ of

_____, the party making the foregoing bid. The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the Bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, Bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on the ____ day _____, 20__ at _____, California.

CONTRACTOR's Signer's Name

CONTRACTOR's Signer's Title

CONTRACTOR's Business Name

SECTION 00 45 14

**PUBLIC CONTRACT CODE CERTIFICATIONS
(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID)**

- 1.1 The undersigned (authorized official signing for the bidder) hereby declares under penalty of perjury the following: 1 In accordance with section 6109 of the Public Contract Code, the Bidder certifies that neither the Bidder nor any subcontractor included on the list of proposed subcontractors submitted with the Bid is ineligible to perform work on public works projects pursuant to Labor Code sections 1777.1 or 1777.7. Contractors and subcontractors who are ineligible to perform work on public works projects pursuant to Labor Code sections 1777.1 or 1777.7 may neither bid on, be awarded or perform as a subcontractor on public works projects. The bidder declares that bidder will not enter into any contract with a subcontractor who/which has been debarred pursuant to section 1771 .1 or section 1777 .7 of the Labor Code. No public monies shall be paid to a debarred subcontractor, and any contract entered into for public work between a prime contractor and debarred subcontractor shall be considered void as a matter of law. Any payments made to a debarred subcontractor shall be returned to the County. The prime contractor shall be solely responsible for all payments to a debarred subcontractor. In no case shall any public money be used to pay a debarred subcontractor.
- 1.2 In accordance with section 10162 of the Public Contract Code, has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?
YES _____ NO _____
If the answer is yes, explain the circumstances in the following space (use additional sheets if necessary).
- 1.3 In accordance with section 10232 of the Public Contract Code, has more than one final, unappealable finding of contempt of court by a federal court has been issued against the bidder within the immediately preceding two-year period because of the bidder's failure to comply with an order of a federal court which orders the bidder to comply with an order of the National Labor Relations Board? For purposes of this section, a finding of contempt does not include any finding which has been vacated, dismissed, or otherwise removed by the court because the contractor has complied with the order which was the basis for the finding.
YES _____ NO _____
- 1.4 In accordance with section 10285.1 of the Public Contract Code, the bidder declares that neither the bidder nor any subcontractor to be engaged by the bidder has been convicted of any of the offenses referred to in this section within the preceding three years. These offences include if that bidder or any subcontractor to be engaged by the bidder, or any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, has been convicted by a court of competent jurisdiction of any charge of fraud, bribery, false claims, collusion, conspiracy, or any other act in violation of any state or federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Section 1101, with any state or federal public entity, as defined in Section 1100.

By my signature I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements are true and correct, and that this declaration is executed on this _____ day of _____ 2022, at _____, _____.

Bidder's Signature: _____

END OF SECTION 00 45 14

SECTION 00 45 26

PART 1 -

WORKERS COMPENSATION CERTIFICATION

PROJECT/CONTRACT NO.: 250816

Lake County Sheriff's Administration Facility Contract between County of Lake (the "County" or the "Owner") and _____ (the "Contractor" or the "Bidder") (the "Contract" or the "Project")

Labor Code section 3700 in relevant part provides:

Every employer except the State shall secure the payment of compensation in one or more of the following ways:

1. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state.
2. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees.

I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Date: _____
Proper Name of Contractor: _____
Signature: _____
Print Name: _____
Title: _____

(In accordance with Article 5 - commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any Work under this Contract.)

END OF SECTION 00 45 26

SECTION 00 45 50**PART 1 -****VOLUNTARY LOCAL WORKFORCE PARTICIPATION CERTIFICATION****CONTRACTOR'S CERTIFICATION OF VOLUNTARY LOCAL WORKFORCE PARTICIPATION**

(Lake County Purchasing Code section 2-54)

Prior to certifying this form, bidders are encouraged to read Section 2-54 of Article X of the Lake County Code, of copy of which can be procured at the following website link:

https://library.municode.com/ca/lake_county/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTXPU

Section 2-54 which provides in relevant part:

(A) General Provisions: Every bidder who wishes to obtain a local workforce discount off the bid price must complete and sign under penalty of perjury a **Certification of Voluntary Local Workforce Participation** which shall be provided in the County's bid package and which must be submitted no later than the time bids are due.

(B) Application: A discount, as specified hereinbelow shall be applied to any contractor's bid which voluntarily agrees to meet the County's local workforce participation goals as provided hereinafter. Contractors must indicate the local workforce participation percentage which they are agreeing to provide:

CHECK ONE BOX:

- ☐ 1) Certification of 30% local workforce participation of Contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive 5% bid discount.
- ☐ 2) Certification of 25% local workforce participation of Contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive 4% bid discount.
- ☐ 3) Certification of 20% local workforce participation of Contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive 3% bid discount.
- ☐ 4) Certification of 15% local workforce participation of Contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive 2% bid discount.
- ☐ 5) Certification of 10% local workforce participation of Contractor's total construction labor force, including any subcontractor workforce, measured in contract labor hours to be expended on a public project shall receive 1% bid discount.

Notwithstanding the foregoing bid discounts, in no instances shall the total dollar amount of any said bid discount exceed fifty thousand dollars (\$50,000).

For the purpose of calculating whether a contractor's construction labor force is comprised of qualified local persons, individuals whose primary residence or business address is outside of California shall not be included in the calculation.

VOLUNTARY LOCAL WORKFORCE PARTICIPATION CERTIFICATION

(C) Definitions:

- 1) **Local Workforce** qualified local persons who are working on the construction labor force.
- 2) **Qualified Local Person** means a verifiable resident of Lake County who is specially trained, skilled, experienced and licensed (if required) in the work, trade, or craft specified for the portion of the public work to be performed.
- 3) **Construction Labor Force** means those persons who are working on the actual site of the public project.

(D) Required Documentation: During the performance of the contract, the contractor shall keep and provide to the Awarding Authority, an accurate and certifiable record on a standardized form(s) acceptable by the County, an accurate and certifiable record that shows the name, residence address, trade classification, hours employed, per diem wages and benefits of each person employed by the contractor and the contractor's subcontractors, on the specific public project, including full-time, part-time, apprentices, permanent and temporary employees. All such records must have an original signature and be signed by an authorized officer of the company under penalty of perjury. Contractor shall make contractor's and subcontractor's records available to the County, upon request, within five working days.

(E) Irresponsible Bidder: Pursuant to Section 2-44 of the Lake County Code, the County may declare the bidder to be irresponsible and may debar the bidder from bidding or being listed in any bid on future County contract for public projects if the bidder is found to have violated, or attempted to violate the terms of a bid or contract terms.

I understand that this Certification shall be made a part of any resulting contract with the County. Notwithstanding that understanding, I do hereby CERTIFY that I am familiar with the provisions of Lake County Code section 2-54 and that on the public project at issue, I will hire a local workforce in accordance with the selection that I have indicated above.

I declare under penalty of perjury under the laws of the State of California that, the foregoing certification is true and correct:

Executed on (date)_____ at (city/state): _____

Print/type Bidder's Business Name

Signature: _____

Print Name /Title: _____

END OF SECTION 00 45 50

VOLUNTARY LOCAL WORKFORCE PARTICIPATION CERTIFICATION

DOCUMENT 00 51 13

PART 1 -

NOTICE OF INTENT TO AWARD

**“EXAMPLE”
NOTICE OF INTENT TO AWARD**

SUBJECT: INTENT TO AWARD A CONTRACT FOR PROJECT NO. 250816

Thank you for your participation and interest in this project with the County of Lake.

Based on its evaluation and acceptance of the bids submitted, staff will be recommending to its Board of Supervisors that the contract for **Bid Number 250816** be awarded to _____. Staff's recommendation to accept and award a contract should go before the Board on Tuesday _____. Upon Board approval a draft contract will be submitted to the awardee for review. A signed contract will be issued along with an Agreement Form and Notice to Proceed.

Below is a summary of all bids/proposals received for this project.

1. _____
2. _____
3. _____
4. _____

Please refer to Document 00 21 13 - Instructions to Bidders for submittal requirements.

For information on other contracting opportunities please visit our websites at
<http://www.lakecountycalifornia.gov/Business/WithCounty.htm>

The County of Lake

BY:

NAME:

TITLE:

END OF DOCUMENT

SECTION 00 60 01

PART 1 -

SAMPLE AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2024, by and between the COUNTY OF LAKE, hereinafter called "OWNER" and _____ doing business as _____, (an individual), (a partnership) or (a corporation) hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

(1) The CONTRACTOR will commence and complete the Lake County Sheriff's Administration Facility Project, Bid No. 250816.

(2) The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein.

(3) The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within the time period required by the CONTRACT DOCUMENTS after the date of the NOTICE TO PROCEED and will complete the same within the time period required by the CONTRACT DOCUMENTS unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

(4) The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of \$ _____, as shown in the Contractors BID.

(5) The term "CONTRACT DOCUMENTS" means and includes the following:

- (A) PROJECT MANUAL
- (B) ADVERTISEMENT FOR BIDS
- (C) BIDDERS' CHECKLIST
- (D) BID
- (E) LIST OF SUBCONTRACTORS
- (F) BID BOND
- (G) PAYMENT BOND
- (H) PERFORMANCE BOND
- (I) AGREEMENT
- (J) CHANGE ORDERS
- (K) ADDENDA:

No. _____, dated _____,

No. _____, dated _____,

(6) The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

(7) This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement on the date first above written.

ATTEST: Susan Parker
Clerk of the Board

COUNTY OF LAKE

By: _____

By: _____
Chair, Board of Supervisors

APPROVED AS TO FORM:
LLOYD GUINTIVANO
County Counsel

CONTRACTOR

By: _____

By: _____

Name: _____

Title: _____

Mailing Address: _____

END OF SECTION 00 60 01

SECTION 00 60 02

PART 1 -

SAMPLE PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called PRINCIPAL, and
(Corporation, Partnership or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called SURETY, are held and firmly bound unto the COUNTY OF LAKE, 255 North Forbes Street, Lakeport, CA 95453, hereinafter called OWNER, in the penal sum of

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

THE CONDITIONS OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the _____ day of _____, 2024, a copy of which is hereto attached and made a part hereof for the Lake County Sheriff's Administration Facility Project, Bid No. 250816.

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

PROVIDED, FURTHER, that the said SURETY for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does

September 25, 2024

hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the WORK or to the SPECIFICATIONS.

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

IN WITNESS WHEREOF, this instrument is executed this _____ day of _____, 2024.

APPROVED AS TO FORM:
LLOYD GUINTIVANO
County Counsel

SURETY

CONTRACTOR

By:_____

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

END OF SECTION 00 60 02

SECTION 00 60 03

PART 1 -

SAMPLE PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called PRINCIPAL, and
(Corporation, Partnership or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called SURETY, are held and firmly bound unto the COUNTY OF LAKE, 255 North Forbes Street, Lakeport, CA 95453, hereinafter called OWNER, in the penal sum of _____

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

THE CONDITIONS OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the _____ day of _____, 2024, a copy of which is hereto attached and made a part hereof for the Lake County Sheriff's Administration Facility Project, Bid No. 250816.

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

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

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

IN WITNESS WHEREOF, this instrument is executed this _____ day of _____, 2024.

APPROVED AS TO FORM:
LLOYD GUINTIVANO
County Counsel

SURETY

CONTRACTOR

By: _____

NOTE: Date of BOND must not be prior to date of Contract.

If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

END OF SECTION 00 60 03

County of Lake

**GENERAL
CONDITIONS**

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GENERAL CONDITIONS

1. **DEFINITIONS**

- 1.1 Wherever used in the Contract Documents, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:
- 1.2 ADDENDA -- Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings, and Specifications, by additions, deletions, clarifications or corrections.
- 1.3 AS APPROVED -- The words "as approved", unless otherwise qualified, shall be understood to be followed by the words "by the Engineer".
- 1.4 AS SHOWN, AS INDICATED, AS DETAILED -- These words, and words of like implication, refer to information contained in the drawings describing the work, unless explicitly stated otherwise in other Contract Documents.
- 1.5 BID -- The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
- 1.6 BIDDER -- Any individual, company, corporation, partnership, or joint venture who submits a Bid for the Work as distinct from a sub-bidder who submits a bid to a Bidder. "Lowest Responsive and Responsible Bidder" are as defined in California Public Contracts Code.
- 1.7 BIDDING DOCUMENTS -- The Invitation to Bid, Instructions to Bidders, Sample Forms, Proposal, all conditions of the Contract, Specifications, Drawings and Addenda issued prior to receipt of Bids by Owner.
- 1.8 BONDS -- Bid, Performance, and Payment Bonds and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Documents.
- 1.9 CHANGE ORDER -- A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.
- 1.10 THE CONTRACT -- The Contract is the sum of all the Contract Documents. This Contract represents the entire and integrated agreement between the Owner and the Contractor and supersedes all prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by (1) a written amendment to the Contract signed by the Owner and the Contractor, (2) a Change Order, (3) a written interpretation or clarification issued by the Engineer, or (4) a written order issued by the Engineer.
- 1.11 CONTRACT DOCUMENTS -- The Contract Documents consist of the Owner-Contractor Agreement, the Conditions of the Contract (General and Supplementary), the Drawings, the Specifications, and all Addenda issued prior to execution of the Contract, written amendments to the Contract signed by the Owner and the Contractor, Change Orders, written interpretations or clarifications issued by the Engineer or a written order issued by the Engineer, the Bidding Documents, such as the Advertisement or Invitation to Bid and the Instructions to Bidders, and the Contractor's Bid. Whenever the composite term "Plans and Specifications" is used, it shall be understood to mean the Contract Documents as defined herein. Further clarification of Contract Documents is outlined in the Contract between Owner and Contractor.
- 1.12 CONTRACT PRICE -- The total monies payable to the Contractor under the terms and conditions of the Contract Documents.
- 1.13 CONTRACT TIME -- The number of calendar or working days stated in the Contract Documents for the completion of the Work.

- 1.14 CONTRACTOR -- The person, firm or corporation with whom the COUNTY has executed the Agreement.
- 1.15 CONTRACT DRAWINGS -- "Contract Drawings" or "drawings" means and includes (a) all drawings which have been prepared on behalf of the Owner and which are included in the Contract Documents and all modifying drawings issued by addenda thereto; (b) all drawings submitted pursuant to the terms of the Contract by the Contractor with his proposal and by the Contractor to the Owner during the progress of the Work when accepted by the Engineer.
- Except where a specific type of drawing is indicated, the terms "Drawings" and "Plans" are used interchangeably throughout the Contract Documents, and the Plans are Drawings as defined above.
- 1.16 DAYS -- Unless otherwise specifically stated, the term "days" shall be understood to mean "calendar days".
- 1.17 DIRECTED, REQUIRED, ACCEPTABLE -- When these words refer to the Work of its performance, "directed," "required," "permitted," "ordered," "designated," or "prescribed," and words of like implication, mean "by direction of," "permission of," "order of," "designation of," or "prescription of" the Engineer. Likewise, "acceptable," "satisfactory," "in the judgment of", and words of like import, mean "recommended by", "acceptable to", "satisfactory to", or "in the judgment of" the Engineer.
- 1.18 ENGINEER -- Wherever in these documents the word "Engineer" appears, it shall be understood to mean County of Lake, Director of Public Works, or his authorized agent. The authorized agent maybe an employee so designated by the Department of Public Works, or the Engineer and/or his consultants as defined in these documents. The Engineer will have final authority as regards contract administration, field inspection and related items.
- 1.19 FIELD ORDER -- A written order effecting a change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.
- 1.20 INSTALL -- "Install", wherever and in whatever manner used, shall mean the installation complete in place of an item. A complete installation shall also mean to provide all materials/equipment/utility services, etc. for a fully functional or operable installation to meet the requirements of use of equipment, devices, and materials in this work.
- 1.21 MANUFACTURER -- An individual, company, or a corporation who manufactures, fabricates, or assembles a standard product. A standard product is one that is not made to special design, and is furnished by either direct sale or by Contract to the Contractor, Subcontractor or Vendor.
- 1.22 MATERIAL SUPPLIER OR VENDOR -- A person or organization who supplies, but who is not responsible for the installation of, materials, products and equipment of a standard nature that are not specifically fabricated for this particular Contract.
- 1.23 NOTICE OF AWARD -- The written notice of the acceptance of the Bid from the Owner to the successful Bidder.
- 1.24 NOTICE TO PROCEED -- Written communication issued by the Owner to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work.
- 1.25 OR EQUAL -- The terms "or equal" or "approved equal" shall be understood to indicate that the "equal" product be the same or better than the product named in function, performance, reliability, quality, and general configuration. Determination of equality in reference to the project design requirements will be made by the Engineer.
- 1.26 OWNER -- Wherever in these documents the word "Owner" appears, it shall be understood to mean County of Lake.
- 1.27 PRODUCT -- The term "product" includes materials, systems and equipment.

- 1.28 PROJECT -- The undertaking to be performed as provided in the Contract Documents.
- 1.29 PROJECT MANUAL -- The Project Manual includes the Bidding Requirements, all conditions of the Contract and the Specifications.
- 1.30 PROPOSAL -- A complete and properly signed document whereby a Bidder proposes to do the Work or designated portion thereof for the sums stipulated therein, supported by data called for by the bidding requirements.
- 1.31 PROVIDE -- "Provide", wherever and in whatever manner used, shall be understood to mean provide complete in place, that is, furnish and install.
- 1.32 RESIDENT PROJECT REPRESENTATIVE -- The authorized representative of the Owner who is assigned to the Project site or any part thereof.
- 1.33 SERVICE OF NOTICES -- Any notice, order, direction, request or other communication given by the Owner to the Contractor under the Contract shall be deemed to be well and sufficiently given to the Contractor if left at any office used by the Contractor, or delivered to any of his officers, clerks or servants, or posted on the site of the work, or mailed in any post office, addressed to the Contractor at the address mentioned in the Contract, or at the Contractor's last known place of business, and if mailed, shall be deemed to have been given to and received by the Contractor a day after the day of mailing in any post office in the vicinity of the work. All written Notices to Owner shall be per Paragraph 1.45.
- 1.34 SHALL OR WILL -- "Shall", or "Will", whenever used to stipulate anything, means shall or will be done or be performed by either the Contractor or the Owner and means that the Contractor or the Owner has thereby entered into a covenant with the other party to do or perform the same.
- 1.35 SHOP DRAWINGS -- All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.
- 1.36 SHOWN -- "Shown", "indicated", "detailed", and words of like import, wherever and in whatever manner used, with or without reference to the drawings, means shown, indicated or detailed on the drawings or plans.
- 1.37 SPECIFICATIONS: Descriptions, provisions and requirements, pertaining to method and manner of performing work, or to quantities and qualities of materials to be furnished under terms of the Contract.
- 1.38 SPECIFIED -- "Specified", "described", or "noted", wherever and in whatever manner used, means as specified, described or noted in the Contract Documents.
- 1.39 SUBCONTRACTOR -- An individual, firm or corporation having a direct contract with the Contractor or with any other subcontractor for the performance of a part of the Work at the site.
- 1.40 SUBSTANTIAL COMPLETION -- That date as certified by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.

The Engineer may, at his sole discretion, issue a written notice of substantial completion for the purpose of establishing the starting date for specific equipment guarantees, and to establish the date that the Owner will assume the responsibility for the cost of operating such equipment. Said notice shall not be considered as final acceptance of any portion of the work or relieve the Contractor from completing the remaining work within the specified time and in full compliance with the Contract Documents.

- 1.41 SUFFICIENT -- "Sufficient", "necessary", or "proper", "acceptable", "satisfactory", "desirable", and words of like import, wherever and whatever manner used, with or without reference to the Engineer, means sufficient,

necessary, proper, acceptable, satisfactory and desirable in the judgment of the Engineer.

- 1.42 SUPPLEMENTARY CONDITIONS -- Modifications to General Conditions required by a Federal Agency for participation in the PROJECT and approved by the Agency in writing prior to inclusion in the Contract Documents, or such requirements that may be imposed by applicable State laws or local protocols.

References to "Supplemental General Conditions" in the General Conditions and elsewhere in the Contract Documents shall be construed to read "Supplementary Conditions".

- 1.43 SUPPLIER -- Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.
- 1.44 WORK -- The Work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.
- 1.45 WRITTEN NOTICE -- Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof complete, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the Work.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

- 2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the Engineer, as necessary to carry out the Work required by the Contract Documents.
- 2.2 The additional drawings and instruction thus supplied will become a part of the Contract Documents. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.
- 2.3 If for any reason it may become desirable during the course of the Work to change the alignment, dimensions or design of the Work, the Owner reserves the right to issue change orders in writing and give effect to such changes as may be necessary or desirable. The changes may or may not result in a change in the amount of work. When the Contractor considers that any change ordered in writing by the Owner involves extra Work, he shall immediately notify the Owner in writing and shall subsequently keep him informed as to when and where extra Work is to be performed and shall make claim for compensation therefor each month not later than the first day of the month following that in which the work claimed as extra work was performed. If the changes do, in the opinion of the Owner, change the amount of work, the Contract price shall be adjusted as extra work or work and material omitted, as the case may be.
- 2.4 The Engineer may instruct the Contractor in writing to make minor changes in the construction where such changes are, in the opinion of the Engineer, not inconsistent with the purposes of the Contract Documents and where such changes do not involve additional costs for the work to be provided. The Contractor shall make no such minor changes without receipt of written Engineer's instruction setting forth the minor change (usually in the form of a Field Order) to be made and the Contractor's compliance therewith shall constitute his acknowledgement that such minor change will not result in any additional cost for construction.
- 2.5 Except as modified in the contract Documents, any material or operation specified by reference to the published standard or specification shall comply with the latest revision thereof and any supplements or amendments thereto, in effect on the date of the Notice to Contractors. Such standards and specifications, except as modified in the Contract Documents, shall have full force and effect as though printed in the Contract Documents. The Engineer will furnish, upon request, information as to how copies of the standards and specifications referred to may be obtained.
- 2.6 Where additional Work or modification to the Work as described in the Contract Documents is required by the enactment of new or revised Codes and Regulations, the Contract Documents shall be revised in accordance with the "General Conditions of the Contract for Construction" to reflect any change in Contract

Time or Contract Cost that may result.

- 2.7 The Conditions of the Contract and the requirements of Division 1, General Requirements are to be considered a part of each Specification Section and/or heading. All portions of the Work, regardless of scope, location, materials or trade involved shall conform to the requirements therein.

3. CONSTRUCTION SCHEDULES, REPORTS AND RECORDS

- 3.1 The Contractor shall submit to the owner such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data, where applicable, as are required by the Contract Documents for the Work to be performed.
- 3.2 Prior to the first partial payment estimate, the Contractor shall submit construction progress schedules showing the order in which he proposes to carry on the Work, including dates at which he will start the various parts of the WORK, estimated date of completion of each part and as applicable:
- 3.2.1 The dates at which special detail drawings will be required; and,
- 3.2.2 Respective dates for submission of Shop Drawings, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.
- 3.3 The Contractor shall also submit a schedule of payments that he anticipates he will earn during the course of the Work.

4. DRAWINGS AND SPECIFICATIONS

- 4.1 The intent of the Drawings and Specifications is that the Contractor shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the Work in accordance with the Contract Documents and all incidental work necessary to complete the Project in an acceptable manner, ready for use, occupancy or operation by the Owner.
- 4.2 In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings.
- 4.3 Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Engineer in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.
- 4.4 In resolving inconsistencies among two or more sections of the Contract Documents, precedence shall be given in the following order: 1) Contract, 2) The Bid, 3) Supplementary Conditions, 4) Instructions to Bidders, 5) General Conditions, 6) Specifications and 7) Plans. Figure dimensions on Plans shall take precedence over scale dimensions; detailed Plans shall take precedence over general Plans. The Drawings shall govern in matters of quantity, and the Specifications in matter of quality. In case of conflict within the Drawings involving quantities, or within the Specifications involving qualities, the greatest quantity and the highest quality shall be furnished.
- 4.5 The organization of the Specifications into division, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the work among subcontractors or in establishing the extent of the Work to be performed by any Trade. The Engineer will not arbitrate disputes among subcontractors concerning responsibility for performing any part of the Project.

5. SHOP DRAWINGS

- 5.1 The Contractor shall provide Shop Drawings as may be necessary for the prosecution of the work as required

by the Contract Documents. The Engineer's approval of any Shop Drawing shall not release the Contractor from responsibility for deviations from the Contract Documents. The approval of any Shop Drawing which substantially deviates from the requirements of the Contract Documents shall be evidenced by a Change Order.

- 5.2 When submitted for the Engineer's review, Shop Drawings shall bear the Contractor's certification that he has reviewed, checked and approved the Shop Drawings and that they are in conformance with the requirements of the Contract Documents.
- 5.3 That Portion of Work requiring a Shop Drawing or sample submission shall not begin until the Shop Drawing or submission has been approved by the Engineer. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the Engineer.
- 5.4 Acceptance by the Engineer of any drawing, method of work, or any information regarding materials and equipment the Contractor proposes to furnish shall not relieve the Contractor of his responsibility for any errors therein and shall not be regarded as an assumption of risks or liability by the Engineer or Owner, or any officer or employee thereof, and the Contractor shall have no claim under the Contract on account of the failure or partial failure or inefficiency or insufficiency of any plan or method of work or material and equipment so accepted. Such acceptance shall be considered to mean merely that the Engineer has no objection to the Contractor using, upon his own full responsibility, the plan or method of work proposed, or furnishing the materials and equipment proposed.

6. MATERIALS, SERVICES AND FACILITIES

- 6.1 It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the Work within the specified time.
- 6.2 All proposed onsite staging and storage locations shall be submitted prior to placement for operational and security review.
- 6.3 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.
- 6.4 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
- 6.5 Materials, supplies and equipment shall be in accordance with samples submitted by the Contractor and approved by the Engineer.
- 6.6 Materials, supplies or equipment to be incorporated into the Work shall not be purchased by the Contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.
- 6.7 The completed work shall include all necessary permanent safety devices, such as machinery guards and similar ordinary safety items required by the State and Federal (OSHA) industrial safety authorities and applicable local and national codes. Further, any features of the work subject to such safety regulations shall be fabricated, furnished, and installed in compliance with these requirements. Prior to performing Work specified herein, the Contractor shall request an inspection by a State Industrial Safety representative for the purpose of determining that the facilities provided are in compliance with the State and Federal safety requirements. Any facilities which are deemed necessary by official response following the above safety inspection shall be added or corrected as required as a part of the Contract work. However no payment will be made to the Contractor for such changes or additions to equipment furnished under this Contract since it is a

requirement of these Specifications that such equipment be manufactured or fabricated in such a manner as to be in conformance with all Federal, State, and local safety requirements. The Contractor shall notify all manufacturers, equipment suppliers, and subcontractors of the provisions of this article.

In approving equipment for installation in the project, the Owner and Engineer assume no responsibility for injury or claims resulting from failure of the equipment to comply with applicable National, State, and local safety codes or requirements, or the safety requirements of a recognized agency, or failure due to faulty design concepts, or defective workmanship and materials.

- 6.8 All materials incorporated into the job shall be new, especially purchased for the project unless otherwise specified or agreed in writing. Unless otherwise noted, any equipment offered shall be current modifications which have been in successful regular operation under comparable conditions for a period sufficient to determine the reliability of the product. This time requirement, however, does not apply to minor details nor to thoroughly demonstrated improvements in design or in materials of construction.
- 6.9 Whenever the contractor shall furnish materials or manufactured articles or shall do work for which no detailed specifications are set forth, the materials or manufactured articles shall be of the best grade in quality and workmanship obtainable in the market from firms of established good reputation, or, if not ordinarily carried in stock, shall conform to the usual standards of first-class materials or articles of the kind required with due consideration of the use to which they are to be put. In general, the Work performed shall be in full conformity and harmony with the intent to secure the best standard of construction and equipment of the work as a whole or in part.

7. INSPECTION AND TESTING

- 7.1 All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the Contract Documents.
- 7.2 Inspections, tests, or approvals by the Engineer or others shall not relieve the Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.
- 7.3 The Engineer and his representatives will at all times have access to the Work. In addition, authorized representatives and agents of any participating Federal or State agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof.
- 7.4 If any Work is covered contrary to the written instructions of the Engineer, it must, if requested by the Engineer, be uncovered for his observation and replaced at the Contractor's expense.
- 7.5 If the Engineer considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing, as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, materials, tools and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such Work is not found to be defective, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

8. SUBSTITUTIONS

- 8.1 Whenever a material, article or piece of equipment is identified on the Drawings or Specifications by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and

function shall be considered. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand name or catalogue number, and if, in the opinion of the Engineer, such material, article, or piece of equipment is of equal substance and function to that specified, the Engineer may approve its substitution and use by the Contractor. Any cost differential shall be deductible from the Contract Price and the Contract Documents shall be appropriately modified by Change Order. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the Project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time. **Substitutions shall be made during the bid period only.**

Substitutions after the bid period will only be considered for items that are no longer being manufactured, are not available, or are equal to those specified as determined above by the Engineer, and a substantial cost savings may be realized. Contractor shall be held to those items, equipment or materials specified in the Contract Documents as a base price. Should the Contractor bid an item of less cost or quality with the intent to substitute after the bid, the Contractor shall (if the Owner accepts the change) provide the credit to the Owner of the difference in cost as if the specified item had been bid.

8.2 Requests for substitution shall be made, in writing to the Engineer, in ample time so as not to cause any delay in the execution of the Work and within the Substitution review period designated in the Contract Documents. Time used by Engineer in making decisions on substitute materials will not be allowed as a claim for extension of working time.

8.3 The technical sections of the Specifications have been written in accordance with the requirements of the Government Code of the State of California. Approval of any proposed substitution or equal for the specified material equipment or method will be made by the Engineer on the basis of quality, performance, finish, arrangement, price, colors and color selection range, ease of repair and maintenance, or any combination thereof. In his review of the data submitted concerning materials and equipment offered and an equal or in lieu of those specified, the Engineer will use for purposes of comparison all the characteristics of the specified item as they appear in the manufacturer's published data even though all the characteristics of the specified item may not have been particularly mentioned in the Specification. The Contractor shall furnish all data of the item being substituted for the Engineers use in determining acceptance of the substituted product. The Engineer may request such data, field tests, or physical presentation, to be submitted at Contractor's expense, as he may require to make his decision, which shall be final.

8.4 If, after the Engineer has made an approval of materials, method or equipment, it is found that the materials, method or equipment presented and approved for use are not justifiably equal in quality and performance to that originally specified, the Engineer retains the right to revoke said approval, and to reject the materials, method or equipment without any additional cost to the Owner.

9. PATENTS

9.1 The Contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer of manufacturers is specified; however, if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Engineer.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The Contractor shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the Work together with a suitable number of bench marks adjacent to the Work as shown in the Contract Documents. Cost of these surveying services required to establish and check property elevations and to correctly locate and establish property and construction lines, streets, sidewalks, curbs, etc., shall be included in the Contract Sum. Contractor shall be responsible for encroachments on the rights or property of the public or surrounding property owners, and for encroachments on easements noted and required set backs, and he shall, without cost to the Owner, take down. Rebuild in an appropriate manner any

unauthorized item that may have been constructed over the property, lot, easement or setback line.

Contractor shall provide these surveys based upon the information provided by the Owner, unless otherwise specified in the Contract Documents, the Contractor shall develop and make all detail surveys needed for construction; such as, slope stakes, batter boards, lines, elevations and cut sheets.

- 10.2 The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.
- 10.3 Permits, Fees, and Licenses of a temporary nature (i.e.: SWPP permit, etc.) necessary for the prosecution of the Work which are customarily secured after execution of the Contract and which are legally required at the time the bids are received, shall be secured and paid for by the Contractor unless otherwise stated in the Supplemental General Conditions. Permits, licenses and easements for permanent structures shall be secured and paid for by the Owner unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn and specified. If the Contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in Section 13, "CHANGES IN THE WORK". The Contractor shall document the actual costs paid for all permits to be reimbursed by the Owner, and submit them collectively with an Application for Payment. No added amount for overhead and profit will be allowed to the Contractor on these costs, nor will any percentage be retained on these costs.
- 10.4 The Contractor will provide competent men in his employ to set lines and elevations.
- 10.5 The Contractor shall preserve or replace all existing Federal, State, City, County and private land monuments, unless they are within ten (10) feet of the construction. When these monuments are within the distance specified, the Contractor shall notify the Engineer at least two (2) weeks in advance of the proposed construction in order that the Engineer will have ample opportunity to reference these monuments for later replacement.
- 10.6 For trenches or excavations five feet or deeper, the Contractor shall obtain from the Division of Industrial Safety a permit authorizing such construction.

11. PROTECTION OF WORK, PROPERTY AND PERSONS

- 11.1 The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 11.2 The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the Work may affect them. Contractor shall notify the Owners of adjacent properties within 7 days in advance of utility interruption, and notify the Owner ten (10) days in advance of utility interruptions. The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the Contract Documents or to the acts or omissions of the Owner or the Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor.
- 11.2.1 Contractor shall send proper notices, make necessary arrangements, perform other services required in care

and maintenance of all public utilities and assume all responsibility concerning same. Notify proper utility if damage occurs. Observe all rules and regulations of the respective utilities in executing the Work.

- 11.2.2 Contractor shall carefully check areas where operations of the Contract are to be performed and observe any existing overhead wires, equipment and other obstructions. Any such work shall be moved, replaced or protected, as required, whether or not shown or specified.
- 11.2.3 Locations of existing underground lines shown on Drawings are based on information from best available sources, but are to be regarded as approximate only. The Contractor shall be responsible for all saw cutting, trenching, back filling, compaction, and patching of concrete and asphalt as required to perform his work. Attention is called the fact that there are underground utility lines. The Contractor shall coordinate all proposed trenching with the Facility. The Contractor shall use extreme caution and use X-Ray machine prior to trenching for his work. The Contractor shall be responsible for the proper and approved repair of any and all damages caused by his work.
- 11.2.4 Exercise all reasonable precautions to preserve and protect any existing underground improvements whether or not shown or specified. Active utilities shown on Drawings shall be adequately protected from damage and removed or relocated only as indicated or specified. Where active utilities are encountered but are not shown on Drawings, Engineer shall be advised; Work shall be adequately protected, supported, or relocated as directed by Engineer; Contract Sum will be adjusted for such additional work.
- 11.3 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. He will give the Engineer prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved.
- 11.4 The Contractor shall at all times so conduct his work as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work, and to insure the protection of persons and property. No road or street shall be closed to the public except with the written permission of the Engineer and proper governmental authority at least fourteen days before the actual road closure is made. Fire hydrants and their valves on or adjacent to the work shall be kept accessible to fire fighting equipment at all times. Temporary provisions shall be made by the Contractor to insure the use of sidewalks and private and public driveways, and the proper functioning of all gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.
- 11.5 Property acquired or Right of Way available for construction is shown on the Plans. The Contractor shall stay within such property or Right of Way or, at his own expense, obtain advance written permission of the Owner to go beyond said lines with appropriate compensation or rehabilitation.

12. SUPERVISION BY CONTRACTOR

- 12.1 The Contractor will supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor will employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall have full authority to act on behalf of the Contractor and all communications given to the supervisor shall be as binding as if given to the Contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.
- 12.2 Owner and Engineer shall not supervise, direct, or have control over, or be responsible for, Contractor's means, methods, techniques, sequences or procedures of construction or for the safety precautions and programs incident thereto, or for any failure of Contractor to comply with laws and regulations applicable to the furnishing or performance of Work. Owner and Engineer shall not be responsible for Contractor's failure to perform or furnish the work in accordance with Contract Documents.

13. CHANGES IN THE WORK

- 13.1 The Owner may at any time, as the need arises, order changes within the scope of the Work without invalidating the Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the Work, an equitable adjustment shall be authorized by Change Order.
- 13.2 The Engineer, also, may at any time, by issuing a Field Order, make changes in the details of the Work. The Contractor shall proceed with the performance of any changes in the Work so ordered by the Engineer unless the Contractor believes that such Field Order entitles him to a change in Contract Price or Time, or both, in which event he shall give the Engineer written notice thereof within seven (7) days after the receipt of the ordered change. The Contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the Owner.
- 13.3 If the Contractor is delayed in completing the work by reason of any change made pursuant to this section, the time for completion of the work shall be extended by Change Order for a period agreed to, commensurate with such delay. The Contractor shall not be subject to any claim for liquidated damages for this period of time, but the Contractor shall have no claim for any other compensation for any such delay.
- 13.4 Suspension of the Work by Owner or Owner's Agents:
- 13.4.1 If the Owner, and its agents, suspend the work, the Contractor, and his subcontractors shall be paid such amount that can be documented and determined to be a fair and reasonable compensation of the Contractor's loss, when such stoppage(s) is a result of actions of those other than the Contractor or his subcontractors.
- 13.4.1.1 Compensation shall include all actual direct costs incurred in additional mobilization and demobilization operations, but limited to a maximum cost of a total of eight crew hours for mobilization and demobilization.
- 13.4.1.2 Rental rates for idle time of equipment will be in accordance with the right of way delay factor for each classification of equipment shown in the Department of Transportation publication entitled Labor Surcharge and Equipment Rental Rates.
- 13.4.1.3 Compensation for idle time for labor will be the actual costs for "show-up time" incurred by the Contractor.
- 13.4.1.4 No markups for overhead and profit will be added in these costs.
- 13.4.1.5 No additional compensation will be made for loss of productivity on any item of work in the Contract.
- 13.4.2 In the event the Contractor is granted time extension(s) in accordance with the General Conditions for delays caused by acts of the Owner, its employees, those under it by Contract, and/or any other governmental agency and through no fault or act of his own or his subcontractors or suppliers, the Contractor and his subcontractor(s) shall only be reimbursed for the following additional field overhead costs as follows:
- 13.4.2.1 Staff salaries (taxable wages)
- Project Manager
 - Superintendent
 - Engineer(s)
 - Secretaries
 - Clerks
- Salaries will be determined from certified payrolls.
- 13.4.2.2 Labor burden for salary related expense such as fringes, insurance and taxes, will be 38% of the salaries in the above paragraph.
- 13.4.2.3 Payment for field office expenses such as vehicles, trailers, power, water, phones, office supplies, toilets, etc. will be at a negotiated rate per calendar day, which shall include the General Contractor and all subcontractor

expenses.

13.4.2.4 No payments will be made for home office overhead items such as salaries, travel, bonds, insurance, etc.

13.4.2.5 No markups for overhead and profit will be added to these costs.

14. CHANGES IN CONTRACT PRICE

14.1 Owner, without invalidating Contract, and as provided by law, may order extra work or make changes by altering, adding to, or deducting from work, Contract sum being adjusted accordingly. All such work shall be executed under conditions of original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. All changes are subject to approval by the Owner and the Project Engineer.

In giving instructions, Engineer shall have authority to make minor changes in work, not involving change in cost, and not inconsistent with purposes of building. Otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order from Owner, and no claim for addition to Contract sum shall be valid unless so ordered.

Value of such extra work, change, or deductions shall be determined at the discretion of Owner, and the method of providing additional cost for review shall be determined by the Owner based on the work involved and the need of the Owner and/or the Engineer to determine the costs are in order with prevailing construction standards in one or more of the following methods in the order of precedence listed below, or as designated above:

- (a) Unit prices previously approved, contained in Contractor's original bid and incorporated in the Contract Documents or fixed by subsequent agreement between Owner and Contractor. (Unit prices previously approved shall be used in all cases for similar units unless mutually agreed that they are for some reason not applicable.)
- (b) An agreed upon lump sum.
- (c) A time and expense basis, involving the actual necessary expenses, and other services necessary to complete the Work. In addition, there shall be added an amount to be agreed upon but not to exceed fifteen percent (15% see 14.1(d) below) of the actual necessary expense to cover the cost of general overhead, general superintendence, other expenses, and profit. In the event that items (a) and (b) above are not applicable, then this latter method (c) shall be used.
The following form shall be followed as applicable for additions and deductions to Contract:
 - (1) Material (attach itemized quantity and unit cost plus sales tax)
 - (2) Labor (attach itemized hours and rates)
 - (3) Subtotal
 - (4) Subcontractor's overhead and profit not to exceed 10% of items 1 and 2. Overhead and profit shall include the following: Public Liability and Property Damage Insurance, Worker's Compensation Insurance, Social Security and Unemployment Taxes, extended home and filed office overheads, Safety meetings, warranties, and all other additional overhead and extended costs Contractor may incur for the change.
 - (5) Subtotal
 - (6) General Contractor's Overhead and Profit (includes Supervision time) on work performed by Subcontractor's, not to exceed 5% of Item 5 should the General Contractor perform the work in question then they shall submit for profit and overhead for the item (total) of 15%.
 - (7) Subtotal
 - (8) Bond Premium, not to exceed 1% of Item 7.
 - (9) Total
- (d) Markup by subcontractors, for their work, shall not exceed ten percent (10%) as per (c) above. General Contractor's markup on subcontractors' work shall not exceed five percent (5%).

If the Contractor should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligates the Owner to pay additional compensation to the Contractor or to grant an

extension of time for the completion of the Contract, (see Section 15 of the General Conditions and associated Supplementary General Conditions), or constitutes a waiver of any provision in the Contract, he shall notify the Owner, in writing, of such claim within ten (10) days from the date he has actual or constructive notice of the factual basis supporting the claim. The Contractor's failure to notify the Owner within such ten (10) day period shall be deemed a waiver and relinquishment of the claim against the Owner. If such notice be given within the specified time, the procedure for its considerations shall be as stated above in this article, or as noted elsewhere in the Contract Documents. Contractor shall have (10) days upon notice of claim to provide complete back-up for review of the Owner and the Engineer. Should the Contractor fail to show within this time frame justification to the Owner in a form acceptable to the Owner for the claim, as noted above and within all sections of the Contract Documents describing this procedure, the claim will become null and void.

- 14.2 In order to arrive at the mutually agreed upon lump sum referred to above, the Contractor shall provide the Engineer with a detailed breakdown for materials, equipment and labor, including an item for overhead and profit as defined above.
- 14.3 If the Contractor is directed to do the extra work on a time and expense basis, the Contractor shall keep an accurate daily record in a manner acceptable to the Engineer of all actual necessary expense pertaining to the extra work. The record will be signed by the Engineer and the Contractor daily, and one copy will be retained by the Engineer.
- 14.4 "Actual necessary expense" shall mean the sum of the following items, and all such costs shall mean actual costs whether incurred by the Contractor, a subcontractor, or others:
- (a) Materials and Equipment. Materials and equipment furnished by the Contractor and necessarily used in the work shall include applicable taxes and discounts whether taken by the purchaser or not.
 - (b) Labor. The cost of labor shall include the actual wages paid, all workers' compensation premiums, State unemployment, Federal Social Security payments, other payments required by State or Federal law, and payments made on behalf of workers as required by collective bargaining agreements.
 - (c) Supervision. The actual cost of supervision shall include only the supervisor employed full-time supervising the extra Work, when authorized in writing by the Engineer.
 - (d) Construction Equipment. Equipment rental rates for the use of equipment required in the performance of the extra Work shall be one of the following: those listed in the latest State of California, Department of Transportation publication entitled "Labor Surcharge and Equipment Rental Rates" or those mutually agreed upon by the Contractor and the Engineer. Rental rates shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, maintenance, depreciation, storage, insurance and all other incidentals.
Individual pieces of equipment or small tools having a replacement value of \$25 or less shall be considered as expendable and no payment therefor shall be made.
The reasonable cost of moving equipment onto and off the jobsite shall be included, but equipment rental shall not be paid when the equipment is inoperative.
When equipment is used on the extra work for less than five (5) days, hourly rates shall be used, and less than thirty (30) minutes of operation shall be considered to be 1/2 hour of operation; when equipment is used on the extra work more than five (5) days, daily rates shall be used, and less than four (4) hours of operation shall be considered to be 1/2 day of operation.
 - (e) Professional Services. Professional services or advice if authorized in writing by the Engineer.
 - (f) Other Costs. Other costs if authorized in writing by the Engineer.
- 14.5 Contractor shall, when ordered in writing by the Owner, omit work and material to be furnished under the Contract, and the value of the omitted work and material will be deducted from the Contract price. The value of omitted work and material will be a lump sum or unit price agreed upon in writing by the Contractor and the Owner.

Contractor shall provide the Engineer with a detailed breakdown for materials, equipment and labor, including an item for overhead and profit. This shall be accompanied by copies of the original quotations and other documentation from himself, subcontractors and vendors as necessary for the Engineer to substantiate the true value of the work omitted.

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- 15.1 Execution of Contract by Contractor shall constitute acknowledgement by Contractor that Contractor understands, has ascertained and agrees that the County will actually sustain damages in the amount fixed in Contract for each and every calendar day during which completion of Work required is delayed beyond expiration of time fixed for completion or extensions of time as have been allowed pursuant to provisions hereof. Contractor and the County agree that such damages shall be presumed to be the damages actually sustained by Lake County as defined below, and that because of the nature of the project, it would be impracticable or extremely difficult to fix the actual damages.
- 15.1.1 There shall be deducted from any money due or to become due to Contractor subsequent to time for completion of entire Work and extensions of time allowed pursuant to provisions hereof, a sum representing the then accrued liquidated damages.
- 15.1.2 Liquidated damages shall be considered not as a penalty but as agreed monetary damage sustained by County for loss of revenue and increased project administration expenses, including extra inspection, and architectural and engineering expenses, related to this Contract because Contractor failed to perform and complete Work within time fixed for completion or extensions of time and have been allowed pursuant to provisions hereof. Liquidated damages shall not be deemed to include within their scope additional damages arising from defective work, cost of completion of the Contract, cost of substitute space, or damages suffered by others or other forms of liability claimed against the County as a result of delay (e.g., delay or delay related claims of other contractors, subcontractors or tenants), and defense costs thereof, Contractor shall be responsible for the actual amount of any such damages.
- 15.1.3 Should the Contractor fall behind approved Progress schedule, County reserves right to deduct liquidated damages based on an estimated period of late completion. The County need not wait until Contract completion to withhold liquidated damages from Contractor's progress payments. Should money due or to become due to Contractor be insufficient to cover agreed liquidated damages, then the Contractor forthwith shall pay remainder to County.
- 15.1.4 In addition to the liquidated damages set forth in the Agreement, the contractor shall pay for the additional cost charged against the Work for services rendered by the Owner's Inspector and their agents, i.e., Engineer and their consultants, when the Work exceeds the Contract Time and authorized time extensions. The extra inspection cost shall be deducted from any money due or that may become due to the Contractor under the Contract.
- 15.1.5 If the liquidated damages and inspection costs hereinbefore specified exceed the unpaid balance, the Contractor shall pay the difference to the Owner.
- 15.2 Contractor will proceed with the Work at such rate of progress to insure full completion within the Contract Time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the completion of the Work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the Work.
- 15.3 If the Contractor shall fail to complete the Work within the Contract Time, or extension of time granted by the Owner, then the Contractor will pay to the Owner the specified amount for liquidated damages for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.
- 15.4 The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due to the following, and the Contractor has promptly given written notice of such delay to the Owner or Engineer.
- 15.4.1 To any preference, priority or allocation order duly issued by the Owner.
- 15.4.2 To any delays of subcontractors occasioned by any of the causes specified in Article 15.4.1 of this Section.

- 15.5 Since time is of the essence, the Contractor shall commence work under this Contract on or before the date to be specified in the Notice to Proceed.
- 15.6 When Contract has been signed by Contractor and Owner, and funds necessary to make payments as required under Contract are available, Owner will serve a Notice to Proceed upon Contractor to that effect. Start date for Contract Times shall be on the date indicated on the Notice to Proceed. Total number of calendar days for completion of Work on Contract shall be as provided above and on Bid form.
- 15.7 The Contract Times (or milestones) may only be changed by Change Order or Written Amendment and all time limits stated in the Contract Documents are of the essence of the Agreement. The Contract Times (or milestones) will be adjusted in an amount equal to the time lost due to the following: a) Changes in the Work ordered by the Engineer; b) Acts or neglect by the County, acts or neglect of utility owners, acts or neglect of other Contractors performing other Work, provided Contractor has fully and completely performed his responsibilities under the Contract Documents, including but not limited to, his cooperation and coordination responsibilities required by the Contract Documents; or, c) Fires, flood, abnormal weather conditions, earthquakes, civil disturbances, or act of God, provided damage resulting there from is not the result of Contractor's failure to properly protect the Work as required by the Contract Documents.
- 15.7.1 Notwithstanding the foregoing, the Contract Times (or milestones) shall not be extended unless Contractor has actually been prevented from completing any part of the Work within the Contract Times (or milestones) due to delay which is (i) beyond the control of Contractor and (ii) due to reasons for which Contractor is not responsible and (iii) a claim for delay is made as provided for herein. Delays attributable to and within the control of a subcontractor, or it subcontractors, or supplier shall be deemed to be delays within the control of Contractor.
- 15.7.2 Where Contractor is prevented from completing any part of the Work within the Contract Times (or milestones) due to delay beyond the control of both the County and Contractor, an extension of Contract Times (or milestones) in an amount equal to the time loss due to such delay shall be the Contract's sole and exclusive remedy for such delay. The County shall not be liable to Contractor, any subcontractor, any supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of Contractor, or (ii) delays beyond the control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, earthquakes and acts of God or acts or neglect by utility owners or other Contractors performing other work.
- 15.8 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER
- 15.8.1 Terms:
- 15.8.1.1 "Inclement Weather" shall be considered as Temperature, Precipitation (aka Rainfall & Rain Days) or The conditions for Inclement Weather are defined below, and valuations of Inclement Weather are listed in the Fog. Meteorological Data NOAA Chart. The Contractor shall obtain the data from NOAA. The Owner reserves the right to update Meteorological Data included in the NOAA Chart, so that it reflects the most accurate data for the project site, site conditions and locality.
- 15.8.1.2 "Unusually Severe Weather" is more severe than the anticipated Inclement Weather for any given month.
- 15.8.1.3 NOAA, is the National Oceanic and Atmospheric Administration
- 15.8.1.4 "Mud" (aka Mud Days) shall be considered as muddy site conditions, which prohibits access to and around the project site, including access to the buildings. Mud is a direct result of precipitation, and for this reason Mud is treated differently than precipitation Mud, or muddy site conditions, will become a candidate for time extensions, only if the amount of precipitation exceeds that which is anticipated and considered normal "Inclement Weather" for a given month. The Contractor shall understand that even if the anticipated normal precipitation were exceeded for a given month, not all Mud Days may be eligible for time extensions. Only a portion of the actual Mud Days may be considered for a time extension, of which they will be the percentage

of actual precipitation that are above and beyond the anticipated normal precipitation or "Inclement Weather": See "Unusually Severe Weather". Also, precipitation and Mud need to materially affect the activities on the critical path in order for them to impact the project schedule. If precipitation and Mud do not materially affect the critical path of the project, there is no effect to the project and such conditions are not eligible for time extensions. Differing site soil conditions and drainage patterns will create individual variations in how "Mud" affects the site and the progress of the Work. It is the Contractors obligation to become aware of the site soil conditions, drainage patterns, and other elements that may affect the resulting impacts due to Mud.

- 15.9 The unusual weather experience at the project site during the affected Contract period must be found to be Unusually Severe Weather, that is, more severe than the anticipated Inclement Weather and Mud for any given month.
- 15.9.1 The Unusually Severe Weather must actually cause a delay to the completion of the Contract. The delay must be beyond the control and without the fault or negligence of the Contractor.
- 15.9.2 The following schedule of anticipated monthly Inclement Weather is based on National Oceanic and Atmospheric Administration (NOAA) data for the project location and shall constitute the baseline for evaluating weather-related time extensions. The Contractor's progress schedule must include the effect of anticipated Inclement Weather and Mud in all weather dependent activities. Further, the Contractor's bid shall include all costs for potential disruptions as a result of anticipated Inclement Weather and Mud: Disruption to the project may involve cost and time impacts. The Contractor shall be responsible for all impacts resulting from the anticipated amount of Mud and Inclement Weather shown in the following NOAA Meteorological Data Chart. Impacts include, but are not limited to, de-watering, mucking, temporary weather protection, gravel roadways, equipment downtime, etc.
- 15.9.2.1 Upon Notice to Proceed (NTP) and continuing through the Contract duration, the Contractor shall record each occurrence of Inclement Weather and Mud, and the resulting impact to the progress of scheduled Work. Inclement Weather days will be as defined by the following NOAA data and will be counted chronologically from the first to the last day of each month, with each daily incidence of Inclement Weather being counted as a whole day. Once the number of days of anticipated Inclement Weather and Mud are exceeded in a given month, the Contractor will become eligible for an excusable, non-compensable time extension for Unusually Severe Weather delay day will occur when adverse weather prevents work on critical activities for more than fifty percent (50%) of the Contractor's scheduled work day. Upon experiencing critical path delays due to Unusually Severe Weather, the Contractor shall seek a time extension for the Engineer. If the foregoing conditions are met, an excusable non-compensable time extension may be granted.

Meteorological Data for Lakeport, California
Normals, Means and Extremes
TEMPERATURES

Month	Normal		Extremes		Precipitation Normal (in)
	Daily Max	Daily Min	Record Highest	Record Lowest	
January	53.7	32.7	71	20	6.74
February	67.2	35.4	76	23	5.93
March	61.9	37.3	82	27	4.75
April	67.8	39.3	91	28	1.70
May	78.5	44.1	99	33	.85
June	84.8	49.9	103	37	.22
July	92.2	54.0	107	41	.05
August	91.9	52.9	108	44	.09
September	85.7	49.0	108	41	.48
October	74.9	43.3	94	31	1.48
November	60.0	36.6	83	24	4.30
December	53.5	32.8	76	23	4.81
Year					31.40

Source: NOAA, National Oceanic and Atmospheric Administration

15.10 NOTICE OF DELAY

- 15.10.1 Within 7 calendar days of the beginning of any delay Contractor shall notify Engineer, in writing, of all anticipated delays resulting from the delay event in question.
 - 15.10.1.1 Notice shall constitute application for extension of time only if notice requests extension and sets forth the impact of the delay on the critical path and Contractor's estimate of additional time required together with full recital of causes of unavoidable delays relied upon.
 - 15.10.1.2 After receipt of a request for a time extension, with verifiable documents and justifications included, Engineer will make decision thereon, and will advise Contractor in writing. No time extensions shall be considered without related documents and justifications necessary for Engineer to make determination.
 - 15.10.1.3 No time extensions shall be granted for delays for which Contractor fails to give timely notice and Contractor hereby waives any and all damages for delay for which timely notice is not given.
 - 15.10.1.4 Any request for extension of time shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant is entitled as a result of the occurrence of said event. All claims and adjustments in the Contract Times (or milestones) shall be determined by Owner and Engineer. No claim for an adjustment in the Contract Times (or milestones) will be valid and such claim will be waived if not submitted in accordance with the requirements of this paragraph.

15.11 NO DAMAGE FOR CONTRACTOR CAUSED DELAY

- 15.11.1 Contractor shall not be entitled to any compensation, including but no limited to extended field or home office overhead, field supervision, costs of capital, interest, escalation charges, acceleration costs or other impacts for any delays caused in whole or in part by Contractor's failure to perform its obligations under this Contract, or during periods of delay concurrently caused by Contractor and either the County or others. Contractor may be compensated for delays caused directly and solely by the County except that Contractor shall not be entitled to damages for delay to the Work caused by the following reasons:
 - 15.11.1.1 The County's right to sequence Work in manner which would avoid disruption to the County's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities require by this Contract; the County's or any Inspector's enforcement of government act or regulation, or the provisions of the Contract Documents;
 - 15.11.1.2 For changed site conditions that are beyond contemplation of parties, except that the County may approve direct costs associated with unknown conditions but not costs or damages which are result of such delays; and
 - 15.11.1.3 Extensive request for clarifications to construction documents or modifications to Contract, provided such clarifications or modifications are processed by the County or its consultants in a reasonable time commensurate with provisions of Contract requirements.

16 CORRECTION OF WORK

- 16.1 The Contractor shall promptly remove from the premises all Work rejected by the Engineer for failure to Comply with the Contract Documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the Owner and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.
- 16.2 All removal and replacement Work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected Work within ten (10) days after receipt of written notice, the Owner may remove such Work and store the materials at the expense of the Contractor.
- 16.3 If, in the opinion of the Engineer, the defective Work is not of sufficient magnitude or importance to make the

Work dangerous or undesirable, or if, in the opinion of the Engineer, the removal of such Work is impractical or will create conditions which are dangerous or undesirable, the Owner shall have the right and authority to retain such Work instead of requiring it to be removed and reconstructed, but will make such deductions therefor in the payment due or to become due to the Contractor as it may deem just and reasonable.

- 16.4 If, following installation of any equipment furnished hereunder, defects requiring correction by the Contractor are found, the Owner shall have the right to operate such unsatisfactory equipment and make reasonable use thereof until the equipment can be shut down for correction of defects without injury to the Owner.
- 16.5 **Correction Period.** If within one year after the date of Final Acceptance or such longer period of time as may be prescribed by law or regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, (i) correct such defective Work or, if it has been rejected by Owner, remove it from the site and replace it with Work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other Work or the work of others resulting there from. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replace, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) shall be paid by Contractor.
- 16.5.1 In special circumstances where a part of the Work is occupied or a particular item of equipment is placed in continuous service before Final Acceptance of all the Work, the correction period for that part of the Work or that item may start to run from an earlier date if so provided by Contract Modification.
- 16.5.2 Where defective or rejected Work (and damage to other work resulting there from) has been corrected, removed or replaced under this provision after the commencement of the correction period, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed, and the Rights of Owner pursuant to CCP Sections 337.1 and 337.15 shall be renewed and extended.
- 16.6 **Owner may accept defective Work:** If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to final payment, also Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses and damages attributable to Owner's evaluation of and determination to accept such defective Work. If any such acceptance occurs prior to final payment, a change order will be issued incorporating the necessary revisions in the Contract Documents with respect to Work, unless the parties are unable to agree upon an appropriate decrease in the Contract Sum, in which case Owner may deduct from monies due Contractor the amount of any all claims, costs, losses (including diminution in value), damages, expenses and liabilities attributable to the defective work. If Contractor disagrees with the deduction, the Contractor may make a claim as provided in Contract Documents.
- 16.6.1 **Owner may correct defective Work:** If Contractor fails within ten (10) days after written notice from Owner to correct defective Work or to remove and replace rejected Work as required, or provide a plan for correction of defective Work acceptable to Owner, or if Contractor otherwise fails to perform the Work in accordance with Contract Documents, Owner may, after ten (10) days written notice to Contractor, correct and remedy any deficiency. In connection with such corrective and remedial action, Owner may exclude Contractor from all or part of the site, take possession of all or part of the Work, and suspend Contractor's work related thereto, take possession of all or part of Contractor's tools, appliances, construction equipment and machinery at the site, and incorporate in the Work any materials and equipment stored at the site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, its representatives, agents, employees, and other contractors access to the site to enable Owner to exercise the rights and remedies under this paragraph. All claims, costs, losses (including diminution in value), damages, expenses and liabilities incurred or sustained by Owner in exercising such rights and remedies will be the responsibility of Contractor and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to Work and the Contract Sum. If the parties are unable to agree on the amount of an appropriate decrease in the Contract Sum, Owner may deduct from monies due Contractor all claims, costs,

losses (including diminution in value), expenses, damages and liabilities attributable to the defective Work, including all costs of repair or replacement of Contractor's defective Work. (If Contractor disagrees with Owner's calculation, it may make a claim as provided by the Contract.)

17 SUBSURFACE CONDITIONS

17.1 The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by written notice of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; or,

17.1.2 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.

17.2 The Owner shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the Work, an equitable adjustment shall be made and the Contract Documents shall be modified by a Change Order. Any Claim of the Contractor for adjustment hereunder shall not be allowed unless he has given the required written notice; provided that the Owner may, if he determines the facts so justify, consider and adjust any such Claims asserted before the date of final payment.

17.3 Contractor shall carefully examine the Drawings, read the Specifications and the forms of other Contract Documents and shall visit the site of the proposed Work, to fully inform himself as to all existing surface and subsurface conditions, weather and rainfall, soils, rock, water table variations, material availability and limitations that may affect the execution of the Work under the Contract and he shall include in the prices bid, the cost of all incidentals and appurtenances. The failure of Contractor to visit and acquaint himself with conditions at the construction site, shall in no respect relieve him from any obligation imposed by his bid or by the Contract.

17.4 The plans for work show the conditions as they are supposed or believed by the Engineer to exist, but it is neither intended nor to be inferred that the conditions as shown thereon constitute a representation by the Owner or its officers that such conditions are universally existent nor shall the Owner or any of its officers or representatives be liable for any loss sustained by the Contract as a result of any variance between conditions as shown on the Plans and alternate conditions revealed during the progress of the Work, or otherwise.

17.4.1 As to above-ground conditions or as-built conditions shown or indicated in the Contract Documents, there is no warranty, expressed or implied, or any representation expressed or implied, that such information is correctly shown or indicated. This information is verifiable by independent investigation and Contractor is required to make such verification as a condition to bidding. In submitting its Bid, Contractor shall rely on the results of its independent investigation. In submitting its Bid, Contractor shall not rely on Owner supplied information regarding above-ground conditions or as-built conditions.

17.4.2 As to any subsurface condition shown or indicated in the Contract Documents, Contractor may rely only upon the general accuracy of actual reported depths, actual reported character of materials (e.g. size of pipe, etc.), actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated. Owner is not responsible for completeness of such information for bidding or construction; nor is Owner responsible in any way for any opinions, conclusions or opinions of Contractor drawn from such information; nor is the Owner responsible for subsurface conditions that are not specifically shown (for example, Owner is not responsible for soil conditions in areas contiguous to areas where a subsurface condition is shown).

17.4.3 Conditions shown in Reports and Drawings Supplied for Informational Purposes: Reference is made to Geotechnical Report for identification of:

17.4.3.1 Conditions: Those reports of explorations and tests of subsurface conditions at or contiguous to the site

that have been utilized by Engineer in preparing the Contract Documents; and

- 17.4.3.2 Physical Conditions: Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site that have been utilized by Engineer in preparing the Contract Documents.
- 17.4.3.3 This report and additional associated drawings are not Contract Documents. Contractor may not in any manner rely on the information in this report, and subject to the foregoing, Contract must make its own independent investigation of all conditions affecting the Work and shall not rely on information provided by Owner.
- 17.5 The Owner assumes no responsibility for any representations made by any of its officers or agents during or prior to the execution of this Contract, unless (1) such representations are expressly stated in the Contract, and (2) the Contract expressly provides that the responsibility therefor is assumed by the Owner.
18. SUSPENSION OF WORK, TERMINATION AND DELAY
- 18.1 The Owner may suspend the Work or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the Contractor, by written notice to the Contractor and the Engineer which notice shall fix the date on which Work shall be resumed. The Contractor will resume that Work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension.
- 18.2 If the Contractor is adjudged a bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the Contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to subcontractors or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the Work or if he disregards the authority of the Engineer, or he otherwise violates any provision of the Contract Documents, then the Owner may, without prejudice to any other right or remedy and after giving the Contractor and his surety a minimum of ten (10) days from delivery of a written notice, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the Contractor will pay the difference to the Owner. Such costs incurred by the Owner will be determined by the Engineer and incorporated in a Change Order.
- 18.3 Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents.
- 18.4 After ten (10) days from delivery of a written notice to the Contractor and the Engineer, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Contract. In such case, the Contractor shall be paid for all Work executed and any expense sustained plus reasonable profit.
- 18.5 If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety (90) days by the Owner or under an order of Court or other public authority, or the Engineer fails to act on any request for payment within thirty (30) days after it is submitted, or the Owner fails to pay the Contractor substantially the sum approved by the Engineer or awarded by arbitrators within thirty (30) days of its approval and presentation, then the Contractor may, after ten (10) days from delivery of a written notice to the Owner and

the Engineer, terminate the Contract and recover from the Owner payment for all Work executed and all expenses sustained.

In addition and in lieu of terminating the Contract, if the Engineer has failed to act on a request for payment or if the Owner has failed to make any payment as aforesaid, the Contractor may, upon ten (10) days written notice to the Owner and the Engineer, stop the Work until he has been paid all amounts then due, in which event and upon resumption of the Work, Change Orders shall be issued for adjusting the Contract Price or extending the Contract Time or both to compensate for the costs and delays attributable to the stoppage of the Work.

- 18.6 If the performance of all or any portion of the Work is suspended, delayed, or interrupted as a result of a failure of the Owner or Engineer to act within the time specified in the Contract Documents, or if no time is specified, within a reasonable time, an adjustment in the Contract Price or an extension of the Contract Time, or both, shall be made by Change Order to compensate the Contractor for the costs and delays necessarily caused by the failure of the Owner or Engineer.
- 18.7 If the Contractor intends to file a claim for additional compensation for a delay caused by the Owner or Engineer at a particular time, he shall file a Notice of Claim with the Owner within 7 days of the beginning of the occurrence. The Notice of Claim shall be in duplicate, in writing, and shall state the circumstances and the reasons for the Claim, but need not state the amount. No Claim for additional compensation will be considered unless a Notice of Claim has been filed with the Owner within the time and in the matter stated above.
- 18.8 If the Contractor is delayed in the progress of the work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor and other than by any act or neglect of the Owner or the Engineer, the Contractor shall, within 48 hours of the start of the occurrence, give notice to the Owner of the cause of the potential delay and an estimate of the possible time extension involved. Within 7 days after the cause of the delay has been remedied, the Contractor shall give notice to the Owner of any actual time extension requested as a result of the aforementioned occurrence.
- 18.9 No extension of time will be considered for time lost due to weather conditions normal to the area. Unusual weather conditions, if determined by the Engineer to be of a severity that could not be predicted, may be considered as cause for an extension of Contract completion time.
- 18.10 Delays in delivery of equipment or material purchased by the Contractor or his subcontractors shall not be considered as a just cause for delay. The Contractor shall be fully responsible for the timely ordering, scheduling, expediting delivery, and installation of all equipment and materials.
- 18.11 Within a reasonable period after the Contractor submits to the Owner a written request for an extension of time, the Engineer will present his written opinion to the Owner as to whether an extension of time is justified and, if so, his recommendation as to the number of days for time extension. The Owner will make the final decision on all requests for extension of time.
- 18.12 In no event shall the Contractor be entitled under this Contract to collect or recover any damages, loss, or expense incurred by any delay other than as caused by the Owner or Engineer.

19. PAYMENTS TO CONTRACTOR

- 19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the Contractor will submit to the Engineer a partial payment estimate filled out and signed by the Contractor covering the Work performed during the period covered by the partial payment estimate and supported by such data as the Engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or in a bonded warehouse, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the Owner, as will establish the Owner's title to the material and equipment and protect his interest therein, including applicable insurance, the Contractor shall show compliance with Section 33 requirements. The

Engineer will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the Owner, or return the partial payment estimate to the Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate. The Owner will, within thirty (30) days of presentation to him of an approved partial payment estimate, pay the Contractor a progress payment on the basis of the approved partial payment estimate. The Owner shall retain five percent (5%) of the amount of each payment until final completion and acceptance of all work covered by the Contract Documents. On completion and acceptance of a part of the Work on which the price is stated separately in the Contract Documents, payment may be made in full, including retained percentages, less authorized deduction.

- 19.1.1 "For any monies earned by the Contractor and withheld by the Owner to ensure the performance of the Contract, the Contractor may, at his request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Part 5 (commencing with Section 22300), Division 2, of the Public Contract Code of the State of California."
- 19.1.2 "Substitution of Securities for Withheld Amounts": Pursuant to Part 5 (commencing with Section 22300), Division 2, of the Public Contract Code of the State of California, securities may be substituted for any monies withheld by a public agency to ensure performance under a Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the public agency, or with a State or Federally chartered bank as the escrow agent, who shall pay such monies to the Contractor upon satisfactory completion of the Contract.
- 19.1.3 Securities eligible for substitution under this Section shall include those listed in Section 16430 of the Government Code of the State of California, or bank, or savings and loan certificate of deposit.
- 19.1.4 The Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.
- 19.1.5 Any escrow agreement entered into pursuant to this Section shall contain as a minimum, the following provisions:
- (a) The amount of securities to be deposited;
 - (b) The terms and conditions of conversion to cash in case of the default of the Contractor; and,
 - (c) The termination of the escrow upon completion of the Contract.
- 19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.
- 19.3 Prior to Substantial Completion, the Owner, with the approval of the Engineer and with the concurrence of the Contractor, may use any completed or substantially completed portions of the Work.
- 19.4 The Owner shall have the right to enter the premises for the purpose of doing work not covered by the Contract Documents. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the Work, or the restoration of any damaged Work except such as may be caused by agents or employees of the Owner.
- 19.5 Upon completion of all the Work under this Contract, the Contractor shall notify the Engineer, in writing, and shall request final payment. If the Work has been completed to the intent of the Contract Documents, the Engineer will recommend acceptance of the completed work and submit a final estimate of the amount due the Contractor under this Contract. Within ten (10) days following Owner's acceptance of the Work, the Owner will file a Notice of Completion with the County Recorder's Office. Thirty-five (35) days after the filing of the Notice of Completion, providing that a Release of Liens or Claims has been received from the Contractor, the Owner will pay to the Contractor all monies due him, less authorized deductions, under the provision of these Contract Documents.

If any lien or claim remains unsatisfied after all payments to the Contractor are made, the Contractor shall

refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien or claim, including all costs and reasonable attorneys' fees.

- 19.6 The Contractor will indemnify and save the Owner or the Owner's agents harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so, the Owner may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor, his Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the Owner shall be considered as a payment made under the Contract Documents by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.
- 19.7 If the Owner fails to make payment thirty (30) days after approval by the Engineer, in addition to other remedies available to the Contractor, there shall be added to each such payment, interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the Contractor.
- 19.8 For work to be done for a lump sum price, the Contractor shall submit a price breakdown to the Engineer immediately after award of the Contract. The price breakdown as agreed upon between the Contractor and Engineer shall be used for preparing future estimates for partial payments to the Contractor, and shall list the major items of the Work and a price for each item. Overhead, other general costs, and profit shall be prorated to each item so that the total of the prices for all items equals the lump sum price. The price breakdown shall be subject to the approval of the Engineer, and the Contractor may be required to verify the prices for any or all items.
- 19.9 Payroll certification forms provided by the Contractor, and fully executed, shall be filed with the Owner at the time of the submission of each claim for a progress payment and also when the claim for final payment is submitted. Wage report forms shall be completed and submitted as required by the applicable Federal agency.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

- 20.1 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Work and for every act and neglect of the Owner and others relating to or arising out of this Work. Any payment, however, final or otherwise, shall not release the Contractor or his sureties from obligations under the Contract Documents or the Performance Bond and Payment Bonds.

21. INSURANCE

- 21.1 CONTRACTOR shall not commence work under this Agreement until he has obtained all the insurance required herein, certificates of insurance have been submitted to COUNTY and said insurance has been approved by COUNTY. The certificates of insurance shall contain a provision that coverage afforded under the policies will not be canceled until at least thirty days (30) prior written notice has been given to COUNTY.
- 21.2 CONTRACTOR shall not allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been obtained.

- 21.3 Any failure of CONTRACTOR to maintain the insurance required by this section, or to comply with any of the requirements of this section, shall constitute a material breach of the entire Agreement.
- 21.4 Certificates evidencing the issuance of the following insurance shall be filed with the COUNTY within ten (10) days after the date of execution of this Agreement by CONTRACTOR:
- a. Compensation Insurance CONTRACTOR shall procure and maintain, at CONTRACTOR'S own expense, during the term hereof, Workers' Compensation Insurance and Employer's Liability Insurance as required by the State of California, for all employees to be engaged in work. In case any such work is sublet, CONTRACTOR shall require subcontractor similarly to provide Employer's Liability and Workers' Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by CONTRACTOR's Workers' Compensation Insurance. Employer's Liability Insurance shall be in an amount not less than \$1,000,000 per occurrence.
 - b. Commercial General Liability CONTRACTOR shall procure and maintain, at CONTRACTOR's own expense during the term hereof, upon himself and his employees at all times during the course of this Agreement, Commercial General Liability Insurance for bodily injury, personal injury and property damage, in an amount of not less than One Million dollars (\$1,000,000) combined single-limit coverage per occurrence including but not limited to endorsements for the following coverages: premises-operations, products and completed operations, blanket contractual, and independent contractor's liability.
 - c. Automobile Liability Insurance CONTRACTOR shall procure and maintain, at CONTRACTOR's own expense during the term hereof, Comprehensive Automobile Liability Insurance, both bodily injury and property damage on owned, hired, leased and non-owned vehicles used in connection with CONTRACTOR's business in an amount of not less than One Million dollars (\$1,000,000) combined single-limit coverage per occurrence.
 - d. Builder's Risk Insurance The Contractor shall secure, if applicable, "All Risk" type Builder's Risk Insurance for Work to be performed. Unless specifically authorized by the Owner, the amount of such insurance shall not be less than the Contract Price totaled in the Bid. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, earth movement, localized flooding, theft, machinery damage, and smoke during the Contract Time, and until the Work is accepted by the Owner. The policy shall name as the insured the Contractor, the Engineer, and the Owner.

Such insurance shall exclude coverage for damages which have been proximately caused by "acts of God", in excess of five percent (5%) of the Contract amount, as such acts are defined in Section 4151 of the Government Code of the State of California as amended. Such insurance shall not exclude coverage for damages caused by earthquake of a magnitude less than that defined in said Section 4151 as an "act of God", or loss caused by the results of faulty workmanship. Such insurance shall provide for losses to be paid the Contractor and the Owner, as their interests may appear. Such insurance may have a deductible clause not to exceed \$1,000 except that the deductible on earthquake may be in accordance with the Underwriter's requirements provided that it does not exceed two percent (2%) of the amount of risk at the time of loss. All Risk insurance need not be provided for buried pipe.

Insurance exclusions shall also include any tools owned by mechanics, or any item owned or rented by the Contractor or subcontractor, the capital value of which is not included in the Contract Sum.

The Builder's Risk policy shall be endorsed to add General or Prime Contractor and all subcontractors as an additional names insured, as their interest may appear, and to waive the carrier's right of recovery under subrogation against Engineer, General or Prime Contractor and all subcontractors whose interest are insured under such policy.

If a claim results from any construction activity, the responsibly General or Prime Contractor shall pay the deductible amount. All Builder's Risk losses will be adjusted with and payable to Owner. Owner shall not be responsible for loss or damage to and will not obtain and/or maintain in force insurance on temporary structures, construction equipment, tools or personal effects, owned, rented to, or in the care, custody and control of General or Prime Contractor or any subcontractor.

In the event of loss or damage not covered by the Builder's Risk policy, the cost of the repair and/or replacement of such loss or damage will be at the CONTRACTOR's expense.

21.5 The Contractor shall, if demanded by the Owner, deliver to the Owner all such policy or policies of insurance and the receipts for payment of premiums thereon; and should the Contractor neglect to obtain and maintain in force any such insurance or deliver such policy or policies and receipts to the Owner, then it shall be lawful for the Owner to obtain and maintain such insurance, and the Contractor hereby appoints the Owner his true and lawful attorney to do all things necessary for this purpose. All money expended by the Owner for insurance premiums under the provisions of this Article shall be charged to the Contractor.

21.6 Subcontractors: CONTRACTOR shall include all subcontractors as insureds under the aforesaid policies or shall furnish separate certificates and endorsements for each subcontractor to COUNTY for review and approval. All coverages for subcontractors shall be subject to all of the requirements hereinabove and contain the additional insured endorsement required by CONTRACTOR hereinafter.

21.7 Other Insurance Provisions

a. The Commercial General Liability and automobile policies are to contain, or be endorsed to contain, the following provisions:

1. The COUNTY, its officers, officials, employees, agents and volunteers are to be covered as additional insureds. CONTRACTOR shall not commence work under this Contract until he has had delivered to COUNTY the Additional Insured Endorsements required herein.
2. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.
3. For any claims related to this project, the CONTRACTOR's insurance coverage shall be primary insurance as respects the COUNTY, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by COUNTY, its officers, officials, employees, agents or volunteers shall be excess of the CONTRACTOR's insurance and shall not contribute with it.

b. The following provisions shall apply to all of the insurance coverages hereinabove:

1. Any deductibles or self-insured retentions must be declared to and approved by COUNTY. At the option of COUNTY, either: CONTRACTOR shall reduce or eliminate such deductibles or selfinsurance retentions; or CONTRACTOR shall provide a financial guarantee satisfactory to COUNTY guaranteeing payment of losses and related investigations, claim administration and defense expenses.
2. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A.VII.
3. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the CONTRACTOR for liability in excess of such coverage, nor shall it preclude COUNTY from taking other actions as is available to it under any other provision of the Agreement or law. Failure of COUNTY to enforce in a timely manner any of the provisions of this section shall not act as a waiver to enforcement of any of these provisions at a later date.

22. CONTRACT SECURITY

22.1 The Contractor shall within ten (10) days after the receipt of the Notice of Award furnish the Owner with a Performance Bond and a Payment Bond in penal sums equal to the amount of the Contract price, conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of the Contract Documents, and upon the prompt payment by the Contractor to all persons supplying labor and materials in the prosecution of the Work provided by the Contract Documents. Such Bonds shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the State of California and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. Said Bonds shall be in the forms set forth in the Contract Documents, each made payable to the Owner. The expense of these Bonds shall be borne by the Contractor.

If at any time a surety on any such Bond is declared a bankrupt, or loses its right to do business in the State of California, or is removed from the list of Surety Companies accepted on Federal Bonds, Contractor shall within ten (10) days after notice from the Owner to do so, substitute an acceptable Bond (or Bonds) in such

form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such Bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable Bond to the Owner.

23. ASSIGNMENTS

23.1 The Contractor shall not assign any interest in this Contract and shall not transfer any interest in the same without the prior written consent of the Owner, except that claims for money due or to become due the Contractor from the Owner under this Contract may be assigned by the Contractor to a bank, trust company, or other financial institution without such approval; written notice of any such transfer shall be furnished promptly to the Owner. Any attempt at assignment of rights under this Contract except for those specifically consented to by both parties or as stated above shall be void.

24. INDEMNIFICATION

24.1 CONTRACTOR shall indemnify and defend COUNTY and its officers, employees, and agents against and hold them harmless from any and all claims, losses, damages, and liability for damages, including attorney's fees and other costs of defense incurred by COUNTY, whether for damage to or loss of property, or injury to or death of person, including properties of COUNTY and injury to or death of COUNTY officials, employees or agents, arising out of, or alleged to arise out of, or connected with CONTRACTOR's operations hereunder or the performance of the work described herein, unless such damage, loss, injury or death is caused solely by the negligence of COUNTY.

24.2 In any and all claims against the Owner or the Engineer, or any of their agents or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may not be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the Contractor under this paragraph shall not extend to the liability of the Engineer, his agents or employees arising out of the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications.

24.4 If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled.

25. SEPARATE CONTRACTS

25.1 The Owner reserves the right to let other Contracts in connection with this Project. 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 WORK with theirs. If the proper execution or results of any part of the Contractor's Work depends upon the Work of any other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such Work that render it unsuitable for such proper execution and results.

25.2 The Owner may perform additional Work related to the Project by himself, or he may let other Contracts containing provisions similar to these. The Contractor will afford the other Contractors who are parties to such Contracts (or the Owner, if he is performing the additional Work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work and shall properly connect and coordinate his Work with theirs.

25.3 If the performance of additional Work by other Contractors or the Owner is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the Contractor prior to starting any such additional Work. If the Contractor believes that the performance of such additional Work by the Owner or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING

by the Owner or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING

- 26.1 The Contractor may utilize the services of specialty subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty Subcontractors.
- 26.2 The Contractor shall not award Work to subcontract(s), in excess of fifty percent (50%) of the Contract Price, without prior written approval of the Owner.
- 26.3 The Contractor shall be fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- 26.4 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the Work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.
- 26.5 Nothing contained in the Contract shall create any contractual relation between any subcontractor and the Owner.
- 26.6 The Contractor shall list on his Bid Proposal all subcontractors performing work or labor in an amount in excess of one-half of one percent (1/2 of 1%) of the total amount of Contractor's proposal. Listing of subcontractors is mandatory under Sections 4100-4113 of the California Public Contract Code.
- 26.7 Pursuant to the provisions in Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web site at:
http://www.dir.ca.gov/dir/Labor_law/DLSE/Debar.html.
- 26.8 **PROMPT PROGRESS PAYMENTS TO SUBCONTRACTORS**
Attention is directed to the provisions in Sections 10262 and 10262.5 of the Public Contract Code and Section 7108.5 of the Business and Professions Code concerning prompt payment to subcontractors.

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 10 days from the receipt of each payment the prime contractor receives from County of Lake. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the County of Lake.

26.9 **PROMPT PAYMENT OF WITHHELD FUNDS TO SUBCONTRACTOR**

The prime contractor agrees further to release retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the County of Lake.

The Contractor shall return all moneys withheld in retention from the subcontractor as stated above, even if the other contract work is not completed and has not been accepted in conformance with Section 48 "Final Inspection", of these General Conditions. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or noncompliance by a subcontractor.

27. ENGINEER'S AUTHORITY

- 27.1 The Engineer shall act as the Owner's representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and Work performed. He shall interpret the intent of the Contract Documents in a fair and unbiased manner. The Engineer will make visits to the site and determine if the Work is proceeding in accordance with the Contract Documents.

27.2 The Contractor will be held strictly to the intent of the Contract Documents in regard to the quality of materials, workmanship and execution of the Work. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The Engineer will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The Engineer shall promptly make decisions relative to interpretation of the Contract Documents.

28. LAND AND RIGHTS OF WAY

28.1 Prior to issuance of Notice to Proceed, the Owner shall obtain all land and rights of way necessary for carrying out and for the completion of the Work to be performed pursuant to the Contract Documents, unless otherwise mutually agreed.

28.2 The Owner shall provide to the Contractor information which delineates and describes the lands owned and rights of way acquired.

28.3 The Contractor shall provide at his own expense and without liability to the Owner any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY

29.1 The Contract shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion. The Contractor warrants and guarantees for a period of one (1) year from the date of Substantial Completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other Work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

30. TAXES

30.1 The Contractor will pay all sales, consumer, use and other similar taxes required by the law of the place where the Work is performed.

31. QUANTITIES OF ESTIMATE

31.1 Wherever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents including the Proposal, they are given for use in comparing bids, and the right is especially reserved, except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the OWNER to complete the Work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims, liability for damage, or adjustment to Contract item bid price.

32. VERIFICATION AND WARRANTY

32.1 The Contractor shall determine the nature and location of the WORK, the general and local conditions, and all other matters which can in any way affect the Work under this Contract. Failure to make an examination necessary for this determination shall not release the Contractor from the obligations of this Contract. The Contractor warrants that no oral agreement or conversation with any officer, agent, or employee of the Owner, or with the Engineer, either before or after the execution of this Contract, has affected or modified any of the terms or obligations herein contained.

33. DOCUMENTS TO BE KEPT ON THE JOB SITE

General Conditions

Revised 2/13/2019

- 33.1 The Contractor shall keep one copy of the Contract Documents on the job site, in good order, available to the Engineer, his representatives and representatives of all agencies having jurisdiction over the Work.
- 33.2 The Contractor shall maintain on the job site, and make available to the Engineer on request, one current fullsize marked-up set of the design drawings which accurately indicate all variations in the completed work that differ from the design information shown on the Plans. Said Plans shall show actual locations and elevations of all buried and concealed Work including piping, conduit, valves, stub outs and the like. Elevations shall be referenced to first floor finished elevation as datum. Locating dimensions shall be referenced to permanently fixed, accessible, and readily identifiable portions of building or site appurtenances by intersecting coordinate dimensions parallel to and at right angles to building lines.
- 33.3 Contractor shall provide and keep an up-to-date and complete record set of shop drawings. These prints shall be corrected daily and show every change from the approved shop drawings. This set of drawings shall be kept on the job site and shall be used only as a record set. This shall not be construed as authorization for the Contractor to make changes in the contract documents without written authorization. Contractor shall provide proof that the documents are being updated as noted above prior to issuing each payment request. Contractor's payment shall be contingent upon verification of documentation of as-built conditions.

34. ADDITIONAL CONTRACT DOCUMENTS

- 34.1 The Engineer will furnish to the Contractor, on request and free of charge, not more than 5 copies of the Contract Documents and 5 sets of full-size Plans. Additional copies of Contract Documents or Plans may be obtained on request by paying the actual cost of reproducing the Contract Documents or Plans.

35. NO PERSONAL LIABILITY OF PUBLIC OFFICIALS

- 35.1 In carrying out any of the provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

36. RECEPTION OF ENGINEER'S DIRECTIONS

- 36.1 The Superintendent, or other duly authorized representative of the Contractor, shall represent the Contractor in all matters given to him by the Engineer. Such directions of major importance will be confirmed in writing. Any directions will be so confirmed in each case on written request from the Contractor.

37. EMPLOYEES

- 37.1 The Contractor shall employ only competent subcontractors or skillful persons to do the work, and whenever any subcontractor or person shall appear to be incompetent or to act in a disorderly or improper manner, such person shall be removed from the Work and not again employed under this Contract. The Contractor shall not make any substitution for any subcontractor, person or entity previously selected unless the substitution is acceptable to the Owner.

38. REQUIREMENTS OF CALIFORNIA LAW FOR PUBLIC CONTRACTS

38.1 GENERAL

When the Contract Documents concern public works of the State or any county, municipality, or political subdivision created by its laws, the applicable statutes of the State of California shall apply including, but not limited to, the California Labor Code, Chapter I, Public Works. This contract shall also be subject to the provisions of the Labor Compliance Program (if applicable).

38.2 USE OF APPRENTICES ON PUBLIC WORKS PROJECTS

Attention is directed to the provisions in Sections 1777.5 (Chapter 1411, Statutes of 1968) and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him.

Section 1777.5, as amended, requires the Contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval.

The ratio of work performed by apprentices to journeymen who shall be employed in the craft or trade on the public work may be the ratio stipulated in the apprenticeship standards under which the joint apprenticeship committee operates, but, except as otherwise provided in Section 1777.5, in no case shall the ratio be less than one hour of apprentices work for every five hours of labor performed by a journeyman. However, the minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeymen.

The joint apprenticeship committee shall have the discretion to grant a certificate, subject to the approval of the Administrator of Apprenticeship, exempting a contractor from the 1-to-5 ratio set forth in this section when it finds that any one of the following conditions is met:

- (a) Unemployment for the previous three-month period in the area exceeds an average of fifteen percent (15%).
- (b) The number of apprentices in training in such area exceeds a ratio of 1 to 5.
- (c) There is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth (1/30) of its journeymen annually through apprenticeship training, either on a statewide bases, or on a local basis.
- (d) Assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman.

A contractor to whom the contract is awarded, or any subcontractor under him or her, who, in performing any of the work under the contract, employs journeyman or apprentices in any apprenticeable craft or trade and who is not contributing to a fund or funds to administer and conduct the apprenticeship program in any craft or trade in the area of the site of the public work, to which fund or funds other contractors in the area of the site of the public work are contributing, shall contribute to the fund or funds in each craft or trade in which he or she employs journeymen or apprentices on the public work in the same amount or upon the same basis and in the same manner as the other contractors do, but where the trust fund administrators are unable to accept the funds, contractors not signatory to the trust agreement shall pay a like amount to the California Apprenticeship Council. The contractor or subcontractor may add the amount of the contributions in computing his or her bid for the contract. The Division of Labor Standards Enforcement is authorized to enforce the payment of the contributions to the fund or funds as set forth in Section 227.

The responsibility of compliance with this section for all apprenticeable occupations is with the prime contractor.

The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

The provisions of Section 1777.5 shall not apply to contracts of general contractors or to contracts of specialty contractors not bidding for work through a general or prime contractor, when the contract involves less than thirty thousand dollars (\$30,000) or twenty (20) working days.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards at its branch office.

38.3 LABOR DISCRIMINATION

Add the following subsection:

38.3.1 Attention is directed to the following "Nondiscrimination Clause" that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NONDISCRIMINATION CLAUSE

1. During the performance of this contract, contractor and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
2. This Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS
(GOV. CODE, SECTION 12990).

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of \$5,000, or more.

1. As used in the specifications:
 - a. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;
 - b. "Minority" includes:
 - (i) Black (all persons having primary origins in any of the black racial groups of Africa, but not of Hispanic origin);
 - (ii) Hispanic (all persons of primary culture or origin in Mexico, Puerto Rico, Cuba, Central or South America or other Spanish derived culture or origin regardless of race);
 - (iii) Asian / Pacific Islander (all persons having primary origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); and
 - (iv) American Indian / Alaskan Native (all persons having primary origins in any of the original peoples of North America and who maintain culture identification through tribal affiliation or community recognition).
2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall physically include in each subcontract of \$5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.
3. The contractor shall implement the specific nondiscrimination standards provided in paragraph 6(a) through (e) of these specifications.
4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Government Code, Section 12990, or the regulations promulgated pursuant thereto.
5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities.
Trainees
must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under Steps a. through e. below:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a

working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- b. Provide written notification within seven days to the director of DFEH when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - c. Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the Contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen, etc., are aware of the Contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.
 - e. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out.
7. Contractors are encouraged to participate in voluntary associations which assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's.
 8. The Contractor is required to provide equal employment opportunity for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) if a particular group is employed in a substantially disparate manner.
 9. Establishment and implementation of a bona fide affirmative action plan pursuant to Section 8104 (b) of this Chapter shall create a rebuttal presumption that a contractor is in compliance with the requirements of Section 12990 of the Government Code and its implementing regulations.
 10. The Contractor shall not use the nondiscrimination standards to discriminate against any person because of race, color, religion, sex, national origin, ancestry, physical handicap, medical condition, marital status or age over 40.
 11. The Contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code Section 12990.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Government Code Section 12990 and its implementing regulations by the awarding agency. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code Section 12990.
 13. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

NOTE: Authority cited: Sections 12935(a) and 12990(d), Government Code. References: Section 12990, Government Code.

38.4 HOURS OF LABOR

Eight hours' labor constitutes a legal day's work. The Contractor shall forfeit, as penalty to the Owner, \$25 for each worker employed in the execution of the Contract, by him or by any subcontractor under him, for each calendar day during which any worker is required or permitted to labor more than 8 hours in violation of the provisions of the Labor Code and, in particular, Section 1810 to Section 1817 thereof, inclusive.

38.5 PREVAILING WAGE

The Contractor shall, as a penalty to the Owner, forfeit not more than fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing rates for the work or craft in which the worker is employed for any public work done under the contract by him or her or by any subcontractor under him or her. The amount of forfeiture shall be determined by the Labor Commissioner and shall be based on consideration of the contractor's mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages, or the previous record of the contractor in meeting his or her prevailing wage obligations, or a contractor's willful failure to pay the correct rates of prevailing wages. A mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages is not excusable if the contractor has knowledge of his or her obligations under this part. The difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the contractor.

The contractor shall pay each worker not less than prevailing wages on all public works projects, including maintenance work, exceeding \$1,000 in cost, in accordance with Section 1771 of the Labor Code. The contractor shall also pay travel and subsistence payments to all workers needed to execute the contract, in accordance with Section 1773.8 of the Labor Code.

The Owner will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wages set forth in the Contract Documents. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his Proposal, and will not under any circumstances be considered as a basis of a claim against the Owner on the Contract.

39. **SAFETY**

- 39.1 The Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during performance of the Work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U. S. Department of Labor (OSHA), the California Occupational Safety and Health Act, and all other applicable Federal, State, County, and local laws, ordinances, codes, the requirements set forth below, and any regulations that may be detailed in other parts of these Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.
- 39.2 The Contractor shall appoint for the duration of this Contract, a qualified supervisory employee to develop and/or supervise a Contractor's job safety program that will effectively implement the safety provisions of the above agencies.
- 39.3 The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's safety supervisor, the safety program, or any safety measures taken in, on, or near the construction site.
- 39.4 The Contractor, as a part of his safety program, shall maintain at his office or other well-known place at the job site, safety equipment applicable to the Work as prescribed by the aforementioned authorities, all articles necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons (including employees) who may be injured on the job site.
- 39.5 If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Owner. In addition, the Contractor must promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the Work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- 39.6 If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.
- 39.7 When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, if the asbestos or hazardous substance has not been rendered harmless, the

Contractor may continue work in unaffected areas reasonably believed to be safe, and shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In accordance with Section 25914.1 of the Health and Safety Code, all such removal of asbestos or hazardous substances including any exploratory work to identify and determine the extent of such asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for such delay as provided in Section 8-1.09, "Right of Way Delays", of the Standard Specifications.

40. BEGINNING OF THE WORK

40.1 Before Work shall be started and materials ordered, the Contractor shall meet and consult with the Owner and/or Engineer relative to materials, equipment, right-of-way, schedules and all arrangements for prosecuting the Work.

41. SCHEDULES AND PROGRESS REPORTS

41.1 Prior to submittal of first partial payment request, the Contractor shall furnish the Engineer for his review, a schedule or schedules of expected progress of the Work under the Contract, showing approximately the dates on which each part or division of the Work is expected to be started and finished. The progress schedules shall be submitted regularly and shall cover a time period satisfactory to the Engineer. The Contractor shall also forward to the Engineer, with the request for progress payment each month, a summary report of the progress of the various parts of the Work under the Contract in the shops and in the field, stating the existing status, rate of progress, estimated time of completion, and cause of delay, if any. If the work is behind the submitted schedule, the Contractor shall submit in writing a plan acceptable to the Owner and Engineer for bringing the work up to schedule.

42. CLAIMS

42.1 In any case where the Contractor deems additional compensation is due him for Work or materials not clearly covered in the Contract or by a Change Order, the Contractor shall provide written notice to the Engineer of such case at least 48 hours before he intends to begin the Work in question. If such notification is not given, then the Contractor hereby agrees to waive the claim for such extra compensation.

If the Engineer concurs that additional compensation is due the Contractor, a change will be issued as provided in Section 14.1. If not, the Contractor shall keep a record of the cost of the work in question, in accordance with the provisions of Section 14.1(c). Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. Claims for additional compensation shall be made in itemized detail and submitted, in writing, to the Owner and Engineer within 10 days following completion of that portion of the work for which the Contractor bases his claim. In case the claim is found to be just, it shall be allowed and paid for under a Change Order subsequently issued for the purpose.

42.2 Claims shall be litigated in a court of competent jurisdiction.

42.3 The Director of Public Services will make the final determination of any claims which remain in dispute after completion of claim review by the Engineer's authorized representative. A Claim Review Board, appointed by the Director of Public Services, will review such claims and make a written recommendation. The Contractor may meet with the Claims Review Board to make a presentation in support of such claims with the Engineer's authorized representative present.

43. CLEANING UP

43.1 The Contractor shall at all time, at his own expense, keep property on which work is in progress and the adjacent property free from accumulations of waste material or rubbish caused by employees or by the work and shall maintain material stockpiles in a neat, safe and orderly manner. Upon completion of the construction, the Contractor shall, at his own expense, remove all temporary structures, rubbish, and waste materials resulting from his operation. In the event that the Contractor does not properly clean up promptly, the Owner may separately contract to do so and withhold the cost from the Contractor.

44. NO WAIVER OF RIGHTS

44.1 Neither the inspection by the Owner, through the Engineer or any of his employees, nor any order by the OWNER for payment of money, nor any payment for, or acceptance of, the whole or any part of the Work by the Owner or Engineer, nor any extension of time, nor any possession taken by the Owner or its employees, shall operate as a waiver of any provision of this Contract, or any power herein reserved to the Owner, or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

45. ACCESS BY STATE AND LOCAL GOVERNMENT OFFICIALS

45.1 During construction, Contractor shall supervise, inspect and direct work competently and efficiently, devoting such attention thereto and applying such personal skills and expertise as may be required and necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.

45.2 Owner shall at their option, provide an Inspector and assistant Inspectors, if necessary, who shall act under the direction of the Engineer and the Owner as prescribed by law. Contractor in no way is relieved of any responsibility by the activities of Inspector.

45.3 Work shall be performed under the general observation and administration of Engineer. Contractor shall immediately comply with orders and instructions given in accordance with terms of Contract by Engineer, or by any authorized assistant, inspector or other representative of Engineer acting within scope of duties entrusted, but nothing herein contained shall be taken to relieve Contractor of obligations or liabilities under Contract.

45.3.1 Engineer will provide administration of Contract and observation of the Work as hereinafter described.

45.3.2 Engineer will have authority to act on behalf of Owner only to extent provided in Contract Documents.

45.3.3 Engineer will visit site at intervals as agreed in the Owner / Engineer agreement. However, Engineer will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of Work. On basis of on-site observations, Engineer will keep Owner informed of progress of Work, and will endeavor to guard Owner against defects and deficiencies in Work of Contractor.

45.3.4 Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work.

45.3.5 Engineer will not be responsible for or have control or change over acts or omissions of Contractor, subcontractors, or any of their agents or employees, or any other persons performing Work.

45.3.6 Engineer will review Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with design concept of Work and with information given in Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay.

45.3.7 Engineer will conduct inspections to recommend dates of Substantial Completions and Final Acceptance, will receive and forward to Owner for their review, written warranties and related documents required by Contract and assembled by Contractor.

45.3.8 Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings and Specifications or otherwise) as Engineer may determine necessary, which shall be consistent with the intent of and reasonable inferable from the Contract Documents. Such written clarifications and interpretations will be binding on the Contractor, unless Owner in its discretion directs otherwise. If Contractor believes that a written clarification or interpretation justifies an adjustment in the Contract Sum or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, the Contractor may make a written claim therefore as provided herein.

45.3.9 Based on the observations, Engineer may disapprove or reject Work which Engineer believes to be defective, or that Engineer believes will not produce a complete Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer with consent of Owner, will also have authority to require special inspection or testing of Work, whether or not the work is fabricated, installed or completed.

46. FIRE PREVENTION AND PROTECTION

46.1 The Contractor shall perform all Work in a fire-safe manner. He shall supply and maintain, on the site, adequate fire fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable Federal, local and State fire prevention regulations and where the regulations do not cover, with applicable parts of the National Fire Prevention Standard for "Safeguarding Building Construction Operations", (NFPA No. 241).

47. STORAGE AND PROTECTION OF MATERIALS

47.1 Materials shall be so stored as to ensure the preservation of their quality and fitness for the Work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and they shall be placed under cover. Stored materials shall be located so as to facilitate prompt

inspection. Private property shall not be used for storage purposes without the written permission of the Owner or lessee.

- 47.2 Electrical equipment, devices, and motors shall be placed in dry and warm storage as approved by the Engineer.
- 47.3 All equipment and materials which are not to be painted (such as aluminum and stainless steel) and all factory finished or coated equipment and materials which are not to be painted, that are installed prior to completion of adjacent work, shall be completely covered and protected.

48. FINAL INSPECTION

- 48.1 Upon completion of all the Work under this Contract, and before the request for final payment is made, Contractor shall notify the Engineer in writing, and request a Final Inspection of the Work. This request shall include Contractor's certification that the Contract Documents have been reviewed, that the Project has been inspected for compliance and completed in accordance with the Contract Documents, that Work has been tested and is operational and the Project is completed, and ready for final inspection. The Contractor shall provide to the Engineer copies of Contractor's pre-final Inspection list of items that the Contractor completed prior to requesting the Final Inspection.

When the Work is deemed acceptable under the Contract Documents and the Contract fully performed, the Engineer will promptly record a Notice of Completion. Thirty-Five (35) days after the filing of said Notice of Completion the Engineer shall issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The final Certificate for Payment signed by the Engineer will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment have been fulfilled.

- 48.2 Upon completion of Final Inspection, the Engineer shall transmit in writing to the Contractor a list of items to be completed or corrected before the request for Final payment is made. This list shall be prepared by the Managing Engineer and may be in addition to any list previously prepared or cover any previous work reviewed by the Resident Engineer or Inspectors.
- 48.3 Warranties required by the Contract Documents shall commence on the date of recording of the Notice of Completion in the event that a Certificate of Substantial Completion has not been issued.

49. POSTING OF WAGE RATES

- 49.1 Attention is directed to Section 1735 of the Labor Code of the State of California. No discrimination shall be made in the employment of persons upon public works because of race, color, religion, ancestry, sex, or national origin. Every Contractor and Subcontractor for public works violating this Section is subject to all penalties imposed thereof.
- 49.2 APPRENTICES:
- 49.2.1 The Contractor and all subcontractors shall comply with the provision of Section 1777.5 of the California Labor Code regarding employment of apprentices and contributions of apprenticeship program.
- 49.3 WAGE RATES:
- 49.3.1 Pursuant to the provisions of Articles 1 and 2 of Chapter 1, Part 7, Division 2 of the Labor Code of the State of California, not less than the general prevailing rate of per diem wages for holiday and overtime work for each craft classification or type of worker needed to execute the Work contemplated under this Contract, as ascertained by the Owner, shall be paid by the Contractor and all subcontractors doing or contracting to do any part of said Work. Copies of said schedule of wage rates are available to any interested party on request.

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The Contractor shall post a copy of the prevailing wage rates of per diem wages at the job site as determined by the County of Lake in a prominent place where it can be easily seen by the workers.

- 49.3.2 Employer payments other than those itemized in said schedule of wage rates, as defined in Section 1773.1 of the Labor Code, shall be paid in accordance with the terms of the collective bargaining agreement applicable to the type or classification of the worker or mechanic employed on the Work.
- 49.3.3 All wages paid, including payment for travel and subsistence payments to workers, shall comply with requirements of Section 1773.8 of the Labor Code.
- 49.3.4 Pursuant to Section 1777.5 of the Labor Code, each apprentice shall be paid in accordance with the terms of the collective bargaining agreement applicable to the trade or craft at which he is employed.
- 49.3.5 The Contractor shall forfeit as a penalty to the Owner the sum of twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing rate for such work or craft in which such worker is employed for any work done under the Contract by him or by any subcontractor under him. In addition, the difference between the stipulated prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor. The Contractor and each subcontractor shall keep an accurate record showing the name, occupation, and actual per diem wages paid to each worker employed on the Work contemplated by this Agreement, which record shall be kept open at all reasonable hours to the inspection of the Owner, and to the Division of Labor Law Enforcement. Said Owner shall have, at his election, all the remedies provided by Section 1775 of the Labor Code for the recovery of said penalty.
- 49.3.6 Claims and disputes pertaining to labor classifications shall be decided by the Owner unless local law provides otherwise. The Contractor shall diligently proceed with the Work pending settlement of any dispute which otherwise might delay completion.
- 49.3.7 The wages set forth are the minimum that may be paid by the Contractor. Nothing contained in the Contract Documents shall be construed as preventing the Contractor from paying more than the minimum rate.

50. OVERTIME WORK

- 50.1 Overtime and shift work may be established as a regular procedure by the Contractor and with the written permission of the Engineer. Such permission may be revoked at any time. No work other than overtime and shift work established as a regular procedure shall be done between the hours of 6:00 p.m. and 7:00 a.m., nor on Saturdays, Sundays or legal holidays, except such work as is necessary for the proper care and protection of the work already performed or except in case of an emergency.
- 50.2 All costs for overtime inspection, including those occurring as a result of overtime and shift work established as a regular procedure, shall be paid for by the Contractor. Overtime inspection shall include inspection required during holidays, Saturdays, Sundays, and any weekday between the hours of 6:00 p.m. and 7:00 a.m. Such costs will include, but will not necessarily be limited to, engineering, inspection, general supervision and other expenses which are directly chargeable to the overtime work. All such charges shall be deducted by the Owner from payments due the Contractor.

* * * END OF GENERAL CONDITIONS * * *

SUPPLEMENTARY GENERAL CONDITIONS

These supplementary general conditions add to, amplify, clarify, and in some cases revise the “General Conditions” as found in these Specifications. In the event of a discrepancy, these Supplementary General Conditions shall govern over the General Conditions.

The section numbers of these Supplementary General Conditions correspond to the section numbers of the General Conditions. The General Conditions are hereby revised by adding or amending the following sections:

SECTION 15: TIME FOR COMPLETION AND LIQUIDATED DAMAGES

Replace the following subsections:

15.5 Since Time is of the essence, the Contractor is anticipated to receive the Notice to Proceed (NTP) from the Owner between December 10, 2024 and December 17, 2024 and will be allowed to commence work under this contract immediately following the NTP and fully complete the work no later than April 17, 2026.

Add the following subsections:

15.5.1 The Contractor shall pay to the Owner for each and every day, including Saturdays, Sundays and legal holidays, that he shall be in default in completing the whole work to be done under contract time, the sum of one thousand (\$1,000.00) per day, which sums are by the execution of the Agreement mutually agreed upon as liquidated damages which the Owner will suffer by reason of such default. The owner shall have the right to deduct the amount of such damages from any monies due or to become due the Contractor under this Contract.

SECTION 38.2: USE OF APPRENTICES ON PUBLIC WORKS PROJECTS

Add the following provisions to the end of Section 38.2:

“A contractor’s use of Lake County residents as apprentices on a County public works’ project in accordance with Section 1777.5 of the California Labor Code may be included in the calculation to determine eligibility for a local work force discount but may not exceed the ratios provided in Section 1777.5.

On projects in excess of \$125,000, prior to commencement of work, the prime contractor shall submit a plan acceptable to the Owner which outlines how the apprenticeship requirements will be met by all contractors working on the project.

At any time during the term of the contract and for a period of 30 days thereafter, the prime contractor shall, within 5 days of request by the Owner, provide evidence of compliance with Section 1777.5.

SECTION 51: OCCUPANCY PRIOR TO COMPLETION

Add Section 51, “Occupancy prior to completion”, as follows:

51.1 The Owner reserves the right to occupy, on written notice, any portion of the work at any time before completion while work is in progress. In the event of such occupancy, the Contractor

shall provide, without additional cost to the Owner, suitable protection by means of fencing barriers, posted signs or other method as required to prevent persons

SUPPLEMENTARY GENERAL CONDITIONS

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other than those directly connected with the work from entering remaining areas where continuing work is being conducted, vehicles are operating, or materials are stored.

51.11.1.1 The County's right to sequence Work in manner which would avoid disruption to the County's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities require by this Contract; the County's or any Inspector's enforcement of government act or regulation, or the provisions of the Contract Documents.

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Work by Owner.
4. Future work.
5. Owner-furnished products.
6. Access to site.
7. Coordination with occupants.
8. Work restrictions.
9. Specification and Drawing conventions.
10. Miscellaneous provisions.

1.3 PROJECT INFORMATION

- A. Project Identification: Lake County Sheriff's Administration Facility, Bid No. 250816.

1. Project Location: 1431 Hoyt Avenue, Lakeport, CA 95453 B.

Owner: County of Lake, Public Services Department.

1. Owner's Representative: Lars Ewing, Public Services Director, 333 Second Street, Lakeport CA 95453 (707) 262-1618.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:

1. The Project includes renovation of existing 1-story building originally constructed in 1994. Demolition scope of work includes removal of existing partition, finishes, root top mechanical equipment, electrical equipment. Plumbing fixtures and portion of existing parking stalls. Proposed scope of work includes adding a new second floor within existing structure, new building addition for elevator and supporting equipment room, seismic

upgrade, fully automatic fire sprinkler system, new roof top mechanical equipment, new accessible public parking stalls, and secured parking lot. Approximately 20,323 SF on existing ground floor will include offices, breakroom briefing room, weapons room, interview rooms, evidence room with support spaces, storage, restrooms, locker rooms, and corridors. A new second floor with 3,496 SF of space will provide future office expansion and circulation area. B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

- A. Owner will contract for Testing & Inspections, Commissioning Agent, Geotechnical Engineer Observation & Inspections, IT/Telecom Equipment Installation before, during, and after project activities. Work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.6 CONTRACTOR-FURNISHED PRODUCTS

- A. Contractor shall furnish products indicated. The Work includes unloading, handling, storing, and protecting Contractor-furnished products as directed and turning them over to Owner at Project closeout.

1.7 WORK SEQUENCE

- A. The Contractor shall Coordinate the construction schedule and operations with Project Coordinator and Engineer.

1.8 ACCESS TO SITE

- A. General: Contractor shall have use of Project site for construction operations as indicated on Drawings and as indicated by requirements of this Section.
- B. Use of Site: Work will be conducted between 7:00 AM through 4:30 PM Monday through Friday except Holidays. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.9 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and adjacent buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate

Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

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1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.10 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public roads and highways and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: All work must be performed between 7:00 AM through 4:30 PM Monday through Friday except Holidays, unless otherwise agreed.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify County not less than ten days in advance of proposed utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 1. Notify County not less than two days in advance of proposed disruptive operations.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- B. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard.

1.12 PROJECT SCHEDULE

- A. The Owner will issue a "Notice of Award" letter to the Contractor after the Owner's regular Board meeting. The contract, certificate of insurance, and performance and payment bonds shall be returned/submitted no later than 10 days after receiving the contract for

signature.

- B. Within 10 days after receipt of the contract, certificate of insurance, and performance and payment bonds, the County will issue a Notice To Proceed.
- C. Work may begin on or after the date specified in the Notice To Proceed.

1.13 REGULATORY REQUIREMENTS

- A. Owner has contacted governing authorities and reviewed design requirements of local, state and federal agencies for applicability to Project and secured the following permits and agreements, or confirmation of no jurisdiction, which are included herein as exhibits or will be issued as Bid Addendums when completed:
 - 1. County of Lake, Sewer/Water Department (fees paid)
 - 2. County of Lake, Environmental Health Department (Permit-pending)
 - 3. Lakeport Fire District (Permit-pending)
 - 4. Lakeport School District (fees paid)
 - 5. County of Lake, Public Works Department (fees paid)
 - 6. Lake County Air Quality Management (Permit-pending)
 - 7. County of Lake, Community Development Department (Grading Permit-pending)
 - 8. County of Lake, Building Department (Permit-pending)

1.14 MISCELLANEOUS PROVISIONS

- A. WORKMANSHIP. All work shall be performed in a neat and professional manner using the best recognized practices of the particular trade involved and shall be accomplished by mechanics and workers skilled and trained to properly complete the work required. The work shall proceed vigorously to completion once it is started. Time is of the essence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

SECTION 01 14 00

WORK RESTRICTIONS

SUMMARY
01 10 00 - 5/4

PART I - GENERAL

1.01 WORK HOURS

- A. No Work shall be done outside of standard Monday through Friday 7:00 a.m. to 4:30 p.m. working hours, on holidays or weekends unless prior written approval has been retained from the University's Representative.

1.02 PROJECT PHASING (NOT USED)

1.03 WORK SEQUENCE and WORK RESTRICTIONS (NOT USED)

1.04 CONTRACTOR'S USE OF PROJECT SITE

- A. CONTRACTOR's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings.

1.05 OWNER OCCUPANCY (NOT USED)

1.06 SUBSTANTIAL COMPLETION

- A. Substantial Completion shall be applicable to the entire Work.

1.07 PROTECTION OF PERSONNEL

- A. County of Lake personnel and public visitors will be occupying parts of the adjacent buildings during the construction period. CONTRACTOR shall take proper precautions to ensure the safety of all persons during the construction period.

1.08 WORK SITE DECORUM

- A. Extreme care to limit noise shall be taken at all times that the building is occupied. Loud or unnecessary conversation shall be avoided. The playing of radios, or any audio devices shall be strictly prohibited. Noise, that in the sole opinion of the Owner's Representative, is disturbing or disruptive to occupants of the building and adjacent properties shall be scheduled for periods when the building is not occupied.
- B. CONTRACTOR shall control the conduct of its employees so as to prevent unwanted interaction initiated by CONTRACTOR's employees with County of Lake staff, or other individuals, adjacent to the Project site. Without limitation, unwanted interaction by CONTRACTOR's employees includes whistling at or initiating conversations with passersby. In the event that any CONTRACTOR's employee initiates such unwanted interaction, or utilizes profanity, CONTRACTOR shall, either upon request of Owner's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the Owner.

- C. SMOKE AND TOBACCO-FREE ENVIRONMENT: The Owner is committed to a healthy workplace culture and environment. The project site is a Smoke and Tobacco-Free environment.

Smoking and the use of smokeless tobacco products (e.g., e-cigarettes and other unregulated nicotine products) is strictly prohibited. This policy is intended to provide a healthier, safer, and productive work environment.

- D. Alcoholic beverages are prohibited on the Owner's Project site.

1.09 INTERRUPTION OF BUILDING SERVICES

- A. Planned utility service shutdowns shall be accomplished during periods of minimum usage. In some cases, this will require Work activities before 8:00 a.m. and after 5:00 p.m. and weekend Work, at no additional cost to the Owner. At least 14 calendar days advance notice shall be given to the Owner's Representative before interruptions to utility service (refer to Utility Service Interruption/Shut Down Request) and other interferences with use of existing buildings, surrounding hardscape and roads.
- B. Shutdowns critical to the completion of the project shall be listed as Milestones on the project schedule. The CONTRACTOR shall program Work so that service will be restored in the minimum possible time and shall cooperate with the Owner in reducing shutdowns of utility systems.
- C. The Owner reserves the right to deny shutdown requests based on scheduled workload, research projects, and usage of surrounding buildings or other activities planned on campus.
- D. Owner's costs for initial planned utility service shutdowns shall be borne by the Owner. If repeat utility service shutdowns are required due to work necessary to correct CONTRACTOR's defective work, mistakes in new work layout such as misalignment or installation conflicts with other new work, Owner's costs for repeat shutdown(s) will be deducted from Contract Sum.

1.10 SITE INGRESS AND EGRESS

- A. Access to Project site shall be as indicated on the Drawings. Access to Project site is limited to designated routing on existing access roads. The CONTRACTOR and their employees, subcontractors, suppliers or delivery personnel must stay on the designated roads and may not drive, ride or walk to other locations unless prior permission is provided in writing by the Owner's Representative.
- B. CONTRACTOR shall take all necessary precaution to ensure the safety of the bicyclists and pedestrians that use the campus roads.

- C. CONTRACTOR shall clean the site access and roads affected by the Work and shall maintain such in a dust free and safe and usable condition for motorists, bicyclists and pedestrians. During inclement weather CONTRACTOR shall closely monitor conditions to prevent slickness of roads.
- D. CONTRACTOR shall be permitted to block only 1/2 of a street at a time for momentary site access, unless specified otherwise. The street shall be operational and usable by the Owner at all times.

1.11 MOTOR VEHICLE AND BICYCLE TRAFFIC CONTROL

- A. CONTRACTOR shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. The CONTRACTOR shall provide a schedule of any activity that will impact traffic, or any planned lane or street closure, for approval by the Owner's Representative and shall give a minimum of 14 business days notice before closing any street or access.
- B. CONTRACTOR shall furnish at CONTRACTOR's expense all signage barricades, lights, and flaggers required to control traffic and shall provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for the protection of the public; and maintain, from the beginning of twilight through the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and Work.
- C. CONTRACTOR shall provide directional signs for use throughout the duration of the Project. The quantity shall be determined by the Owner's Representative and CONTRACTOR during a mandatory Pre-construction site meeting. CONTRACTOR shall prepare a mock-up of the sign for approval by the Owner's Representative.
- D. It is the responsibility of the CONTRACTOR performing Work on, or adjacent to, a roadway or highway to install and maintain such devices which are necessary to provide reasonably safe passage for the traveling public, including pedestrians and bicyclists, through the Work, as well as for the safeguard of workers. Before Work begins, a site meeting shall be held to discuss motor vehicle and bicycle traffic control plans for handling traffic through a construction or maintenance zone. Traffic control plans shall be submitted for review by the Owner's Representative and public agency or authority having jurisdiction over the roadway or highway. These traffic control plans shall be prepared by persons knowledgeable about the fundamental principals of temporary traffic controls and the work activities to be performed. The design, selection, and placement of traffic control devices for the traffic control plan shall be based on engineering judgment and in accordance with Part 6 of the California Manual on Uniform Traffic Control Devices for Streets and Highways.

- E. All metal plating and metal bridging shall be non-skid with waffle-patterns or right-angle undulations or shall be coated with a non-skid product. Plating shall be installed with no protruding edges or corners sticking up and with no bouncing or shifting.

PART II - PRODUCTS – Not applicable to this Section.

PART III - EXECUTION – Not applicable to this Section.

END OF SECTION 01 14 00

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SECTION 01 22 00 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The bid items will be paid by Lump Sum Prices. They constitute all of the labor and costs for the completion of the work.
 - 1. No direct or separate payment will be made for providing miscellaneous temporary or accessory works and services, including but not limited to OWNER's and CONTRACTOR's field offices and sheds, surveys, job signs, sanitary requirements, testing, safety devices, submittals, record drawings, water supplies, dust controls, power, maintaining traffic, removal of CONTRACTOR generated waste, watchmen, security, bonds, insurance, cleanup, and all other conditions of the Contract Documents.
- B. All CONTRACTOR Health and Safety provisions to perform the work will be included in related bid items.
- C. Contractor quality control, record drawings, project meetings, and associated testing provisions during the progression of the work will be included in the related bid items.

1.2 RELATED DOCUMENTS

- A. Drawings and Technical Specification.

1.3 SUMMARY

- A. This Section specifies administrative and procedural requirements for lump sum, unit price, and contingency pay items.
 - 1. Bid prices shall be based on Lump Sums and include all necessary material, overhead, profit, and applicable taxes and permit fees.
 - 2. Refer to individual Technical Specifications sections for construction activities requiring the establishment of bid prices, as applicable.
 - 3. OWNER reserves the right to reject the CONTRACTOR's work-in-place until the work meets the requirements of the Drawings and Specifications.

PAYMENT PROCEDURES

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SECTION 01 23 00

ALTERNATES

PART I - GENERAL

1.01 GENERAL

- A. This Section identifies each Alternate and describes basic changes to the Work only when that Alternative is made a part of the Work by specific provision in the Agreement.
- B. Lump Sum Base Bid and Alternates shall include costs of all supporting elements required, so that combination of Lump Sum Base Bid and any Alternates shall be complete. Scope of Work for all Alternates shall be in accordance with applicable Drawings and Specifications.
- C. Except as otherwise specifically provided by University, Work described in Alternates shall be completed with no increase in Contract Time.
- D. This Section includes only non-technical descriptions of the Alternates. Refer to Sections of Division 2 - 48 of the Specifications for technical descriptions of the Alternates.
- E. Coordinate related Work and modify surrounding Work as required to integrate Alternates into the Work properly and completely.

1.02 DESCRIPTION OF ALTERNATES

- A. ADD ALTERNATE #1: Elevator Maintenance Service Contract – 12 Months
- B. ADD ALTERNATE #2: Elevator Maintenance Service Contract – 60 Months
- C. ADD ALTERNATE #3: Solar / PV Parking Canopies (pending Bid Addendum – Appendice I)

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not applicable to this Section

END OF SECTION 01 23 00

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ALTERNATES

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SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - A. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - A. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - B. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copy of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- A. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.

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- b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate
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Contractors that will be necessary to accommodate proposed substitution.

- c. Provide a detailed side-by-side comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes, such as performance, size, weight, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviation, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects with project names and addresses and names and addresses of engineers and owners.
- h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
- j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

- B. Owner's Action: If necessary, Owner will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Owner will notify Contractor through Project Coordinator of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Forms of Acceptance: Change Order, Construction Change Directive, or Owner's Supplemental Instructions for minor changes in the Work.

SUBSTITUTION PROCEDURES

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- b. Use product specified if Owner does not issue a decision on use of a proposed substitution within time allocated.

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1.5 Q
QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.
- B. Request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - 2. Will provide the same warranty for substitution as for specified product.
 - 3. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
 - 4. Waives claims for additional costs which may subsequently become apparent.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Owner or Engineer will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution provides sustainable design characteristics that specified product provided.
 - c. Substitution request is fully documented and properly submitted.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.

SUBSTITUTION PROCEDURES

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- f. Requested substitution is compatible with other portions of the Work.
 - g. Requested substitution has been coordinated with other portions of the Work.
 - h. Requested substitution provides specified warranty.

 - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed unless agreed upon by Owner and Engineer.
- C. Substitutions for Convenience: Owner will consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Owner.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.
 - j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

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END OF SECTION

SECTION 01 25 50

CLARIFICATION/INFORMATION PROCEDURES

PART I - GENERAL

1.01 DESCRIPTION

- A. This Section contains the procedures to be followed by Contractor for submitting a Request for Information (RFI) upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or Drawings or upon having any question concerning interpretation.
- B. Section Includes
 - 1. RFI Administrative requirements
 - 2. RFI Procedures
 - 3. RFI Execution

1.02 RELATED DOCUMENT SECTIONS

- A. Conditions of the Contract: Governing requirements for changes in the Work, in Contract Sum and Contract Time.
- B. Section 016100 – PRODUCT REQUIREMENTS: Product options, substitutions, omissions, and improper descriptions.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Description: Section provides procedure for Contractors to obtain interpretation or clarification of the Contract Documents, or identify apparent conflicts, omissions, or errors in the Contract Documents.
- B. Responsible Person for Contractor: Submit name of the individual authorized to receive Requests for Information documents, and who is responsible for forwarding Request.
- C. RFI Format: Submit all Requests for Information on the form attached at the back of this Section, or electronic and/or web-based construction administration software provided or accepted by the Owner.

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1.04 RFI PROCEDURES

A. RFI Format, Numbering and Subject:

1. RFI Format: Submit all requests for clarification or additional information in writing to Owner's Representative using the RFI Request for Information form provided at the back of this Section or obtained from Owner's Representative.
2. RFI Numbering: Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix for resubmissions. For example, the first RFI is numbered "001". The second RFI is numbered "002" and so on. The first resubmittal of RFI "002" will be numbered "002a".
3. RFI Subject: Limit each RFI to one (1) subject only. B. RFI Submittal conditions:
 1. Discovery of unforeseen condition or circumstance not described in the Contract Documents.
 2. Discovery of an apparent conflict, discrepancy, or inconsistency in or between portions of the Contract Documents.
 3. Discovery of a situation, direction or apparent omission that cannot be reasonably inferred from the intent of the Contract Documents.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 EXECUTION OF RFI's

- A. Email the Owner's Representative the RFIs. Emailed RFI requests received after normal business hours and/or received on non-normal workdays, as defined in Specification

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

Section 013100—COORDINATION, Item 1.07.F.4.A will begin notification time starting at 7:00 a.m. the following workday.

- B. Failure to provide proper information: RFIs will not be recognized or accepted if, in the opinion of Owner's Representative, one of the following conditions exist:
 - 1. Contractor submits the RFI as a request for substitution.
 - 2. Contractor submits the RFI as a Submittal.
 - 3. Contractor submits the RFI as a Contract Document discrepancy or omission without through review of the Documents (Capricious submission).
 - 4. Contractor submits the RFI assuming portions of the Contract Documents are excluded or by taking an isolated portion of the Contract Document in part rather than in whole.
 - 5. Contractor submits the RFI in an untimely manner without proper coordination and scheduling of Work of other Trades.
 - C. Response Time: Request clarifications or information immediately upon discovery of need. Submit RFI's in a timely manner allowing full response time to avoid impacting Contract Schedule.
 - 1. Owner's Representative, whose decision will be final, shall resolve issues and respond to questions of Contractor , in most cases, within fourteen (14) calendar days. Actual time may be lengthened for complex issues, or shortened for expedited situations, as mutually agreed in writing.
 - 2. After submission of an RFI by Contractor and prior to receipt of the RFI response from Owner, the Contractor proceeds with effected Work at own risk. Any portion of the Work not constructed in accordance with Owner interpretation, clarification, instruction or decision is subject to removal and replacement at Contractor expense.
 - D. Failure to Agree: In the event of failure to agree to the scope of the Contract requirements, Contractor shall follow procedures set forth in Article 4 of the General Conditions of the Contract.
- 3.02 Refer to the following Attachment
- A. Request for Information

END OF SECTION 01 25 00

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REQUEST FOR INFORMATION

Project #: _____ Project Title: _____
RFI #: _____ Date: _____ HCAI #: _____

County of Lake Public Services 333 2 nd Street, Lakeport, CA 95453 Attn.: <u>Capital Project Manager</u> P: 707-262-1618 C: 707-245-6911 Email: Joseph.Cooper@lakecountyca.gov	From:	

SUBJECT: _____

SPEC SECTION/DRAWING #: _____ PARA: _____ DETAIL: _____
RM # _____ GRID # _____

TRANSMITTAL RECORD	Requestor to County PS	County PS to A/E	A/E to County PS	County PS to Requestor	Notes
Date Submitted					

INFORMATION NEEDED: _____

CONTRACTOR'S PROPOSED RESOLUTION: _____

REQUESTOR SIGNATURE: _____ REPLY REQUIRED BY: _____

☐ ATTACHMENTS: _____

REPLY:

REPONDER SIGNATURE: _____ DATE: _____

UNLESS OTHERWISE INDICATED ABOVE, THE REPLY TO THIS RFI IS NOT INTENDED TO BE A CHANGE DIRECTIVE. SHOULD THE CONTRACTOR, SUBCONTRACTOR, OR SUPPLIERS FEEL THAT THE REPLY WILL IMPACT THE PROJECT COST OR SCHEDULE; IT SHOULD IMMEDIATELY BE CONVEYED TO THE OWNER'S PROJECT MANAGER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

COPIES: ☐ COUNTY ☐ CONSULTANTS ☐ _____ ☐ _____ ☐ _____ ☐ FILE

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CLARIFICATION/INFORMATION PROCEDURES

August 13, 2024

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGERS IN THE WORK

- A. Owner will issue through Project Coordinator, supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Project Coordinator will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Project Coordinator are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 10 days, after receipt of Proposal Request, Contractor shall submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.

- d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and
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finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- e. Quotation Form: Use forms acceptable to Engineer.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner's Project Coordinator.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use forms acceptable to Engineer.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Project Coordinator will issue a Change Order for signatures of Owner and Contractor.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Owner's Project Coordinator may issue a written Construction Change Directive authorizing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

August 13, 2024

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Within 10 days after the effective date of the Contract, submit a complete schedule of values of all lump sum bid items showing the value assigned to each part of the work.
 - 2. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule in sufficient detail to serve as the basis for progress payments during construction.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Arrange schedule of values consistent with format that is satisfactory to the Project Coordinator.
 - 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
 - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site.
 - 4. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 - 5. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.

6. Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
7. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.

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8. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and Project Coordinator, and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Project Coordinator by the 5th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
- D. Application Preparation: Complete every entry on the agreed to form. Execute by a person authorized to sign legal documents on behalf of Contractor. Project Coordinator will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit two signed original copies of each Application for Payment to Project Coordinator by a method ensuring prompt receipt. One copy shall include waivers of lien and similar attachments if required as well as notarization of the authorized signature, if required.
 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

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5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Products list (preliminary if not final).
5. Sustainable design action plans, including preliminary project materials cost data.
6. Schedule of unit prices.
7. Submittal schedule (preliminary if not final).
8. List of Contractor's staff assignments.
9. List of Contractor's principal consultants.
10. Copies of building permits.
11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
12. Initial progress report.
13. Report of preconstruction conference.
14. Certificates of insurance and insurance policies.
15. Performance and payment bonds.
16. Data needed to acquire Owner's insurance.

H. Application for Payment at Substantial Completion: After Project Coordinator issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706.
 5. AIA Document G706A.
 6. AIA Document G707.
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

SECTION 01 31 00

COORDINATION

PART I - GENERAL

1.01 SECTION INCLUDES A.

Project Meetings

- B. Submittals Requirements
- C. General Contractor Coordination
- D. Coordination of Subcontractor and Separate Contracts
- E. Owner Criteria

1.02 RELATED REQUIREMENTS

- A. Section 011100 – SUMMARY OF THE WORK: Description of Contract Documents.
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 014500 – QUALITY CONTROL
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 015100 – TEMPORARY UTILITIES
- G. Section 015200 – CONSTRUCTION FACILITIES
- H. Section 015500 – VEHICULAR ACCESS AND PARKING: Traffic Regulation.
- I. Section 015600 – TEMPORARY BARRIERS, ENCLOSURES AND CONTROLS
- J. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- K. Section 016100 – PRODUCT REQUIREMENTS
- L. Section 017300 – CUTTING AND PATCHING
- M. Section 017700 – CLOSEOUT PROCEDURES: Coordination of completion reviews, inspections, and submission of documents.
- N. Section 017800 – CLOSEOUT SUBMITTALS: As-Built Documents.
- O. Division 21 - Fire Protection Systems.

P. Division 28 - Fire Alarm Systems

1.03 MEETINGS

- A. Pre-Construction/Site Mobilization Conference: Owner's Representative will administer site mobilization conference at Project site for clarification of responsibilities of Owner, Owner's Representation and Contractor, use of site and for review of administrative procedures. Site mobilization conference shall be held within fourteen (14) calendar days of Notice to Proceed, unless otherwise directed by Owner's Representative.

1. Agenda: Pre-Construction/Site Mobilization Conference shall cover the following topics at a minimum:

- a. Special Project Procedures: Implementation of requirements as specified in Section 013100 – COORDINATION.
- b. Subcontractors List: Provide PDF electronic file. Distribute and discuss list of subcontractors and suppliers.
- c. Construction Schedule: Provide per Section 013200. Distribute and discuss initial construction schedule and critical work sequencing of major elements of Work, including coordination of Owner furnished Contractor installed (OFCI) products, Owner furnished/ Owner installed (OFOI) products, and work under separate contracts, by utility agencies and companies and Owner.
- d. Designation of Key personnel: Designate key personnel and update project directory for Owner, Owner's Consultants, Contractor, major subcontractors, major materials suppliers, serving utility agencies and companies, other contractors performing work under separate contracts and governing authorities having jurisdiction.
- e. Project Communication Procedures: Review requirements and administrative requirements for written, electronic and oral communications.
- f. Change Procedures: Review requirements and administrative procedures for Change Orders, Field Orders, Owner's Representative's Supplemental Instructions, and Contractor Requests for Information.
- g. Coordination: Review requirements for Contractor coordination of Work; review sequence and schedule for work being performed for Owner under separate contracts.
- h. Submittals Administration: Provide per Section 013300 and Section 016100. Review administrative procedures for shop drawings, project data and sample submittals and review of preliminary submittals schedule.
- i. Project As-Built Documents: Provide per Section 017700 and Section 017800. Review requirements and procedures for project as-builts, specifications and other documents.
- j. Construction Facilities and Temporary Utilities: Provide per Section 015100 and Section 015200. Designate storage and staging areas, construction office areas; review temporary utility provisions; review Owner requirements for use of premises.

- k. Materials and Equipment: Review substitution requirements; review schedule for major equipment purchases and deliveries; review materials and equipment to be provided by Owner (OFCI and OFOI products).
 - l. Site Access by Owner's Representative and Owner's Consultants: Review requirements and administrative procedures Contractor may institute for identification and reporting purposes.
 - m. Testing and Inspection: Provide per Section 014550 and other sections of the Contract. Review tests and inspections by independent testing and inspection agencies, manufacturers, and governing authorities having jurisdiction.
 - n. Permits and Fees: Review Contract requirements; review schedule and process for obtaining permits and paying fees.
 - o. Hours of Work and Work Restrictions per Section 011400.
 - p. Hot Works Permit.
- B. Billing Meetings: A billing meeting will be conducted by the Owner's Representative each month prior to submittal of the Application for Payment. Agenda: review of the percent complete relating to the submitted Schedule of Values. Prior to the Billing Meeting the Contractor will submit a draft of the Application for Payment for review by the IOR and Owner Representative.
- C. Progress Meetings: Progress meetings shall be periodically scheduled throughout progress of the Work. Frequency shall be as determined necessary for progress of Work. Generally, it is intended progress meetings be held once a week as designated by the Owner's Representative.
- 1. Administration: Owner's Representative shall make physical arrangements for meetings and prepare agenda with copies for participants, preside at meetings, record minutes, and distribute an electronic file within four (4) workdays to Contractor, Owner's Consultants, and other participants affected by decisions made at meetings.

2. Attendance: Contractor's Project Manager and jobsite Superintendent shall attend each meeting. Contractor 's subcontractors and suppliers may attend as appropriate to subject under discussion. Owner will have a representative at each meeting. Owner's Consultants, as appropriate to agenda topics for each meeting and as provided in Owner/Consultant Agreement, will also attend.

- a. Suggested Agenda for Progress Meetings:

- 1) Building Code/Fire Marshal Issues
- 2) Design Issues
- 3) Submittals and Long Lead Items
- 4) OFCI and OFOI products.
- 5) Request for Information
- 6) Safety Issues
- 7) Scheduling Status/1 Week Prior and 3 Week Look Ahead
- 8) Potential Schedule Delay Issues
- 9) Incomplete or Non-Conforming Work
- 10) Inspection Requests
- 11) Utility Shutdowns and Dig Notifications
- 12) Instructional Bulletins and Field Orders
- 13) Change Orders/Cost Proposals
- 14) Payment Applications and As-Built Documents
- 15) Miscellaneous Business
- 16) Other items affecting progress of the Work

- D. Guarantees, Bonds, Service and Maintenance Contracts Review Meeting: Eleven months following the date of Substantial Completion, a meeting will be conducted by Owner's Representative to review the guarantees, bonds and service and maintenance contracts for materials and equipment.

- E. In addition to meetings listed above, Contractor shall hold coordination meetings and preinstallation conferences to assure proper coordination of Work.

1. Pre-installation Conferences: When required in individual Specification Sections, convene a pre-installation conference prior to commencing Work.

- a. Require attendance by representatives of firms whose activities directly affect or are affected by the Work specified.

- b. Review conditions of installation, preparation and installation procedures and coordination with related Work and Work under separate contracts.
- F. Location of all meetings will be as designated by Owner's Representative. Participants at all meetings shall be Owner's Representatives, Consultants and/or Vendors, Contractor, Superintendent, Subcontractors, and others as appropriate.

1.04 SUBMITTALS

A. Coordination of Submittals: Schedule and coordinate submittals as specified in Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES, Section 017700 – CLOSEOUT PROCEDURES and Section 017800 – CLOSEOUT SUBMITTALS.

- 1. Coordinate submittal effort of various trades, subcontractors and suppliers having interdependent responsibilities for installing, connecting, and placing into service such equipment, materials or installations as necessary for the Work.
- 2. Coordinate requests for substitutions to assure compatibility of space, operating elements, and effect on work of others.
- 3. Contractor shall submit the following submittals to the Owner's Representative who will forward directly to the appropriate State Agencies for their review and approval:
 - a. Fire Protection Drawings: Refer to Division 21
 - b. Fire Alarm System: Refer to Division 28

B. Coordination/Engineering Drawings: Submit in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES and as specified herein. C. Work Plans: Submit as specified herein.

1.05 COORDINATION

A. Coordination: Contractor shall coordinate the Work as stated in the General Conditions of the Contract. Work of the Contract includes coordination of the entire work of the Project, from beginning of construction activity through Project closeout and warranty periods. Contractor shall also coordinate Work under the Contract with work under separate contracts by Owner. Contractor shall cooperate with Owner and others as directed by Owner's Representative in scheduling and sequencing the incorporation into the Work of

Owner Furnished/Contractor Installed (OFICI) products identified in the Contract Documents.

- 1. Coordinate completion and cleanup of work of the separate trades, subcontractors, vendors, etc., in preparation for Owner occupancy.
 - 2. After Owner occupancy, coordinate access to site by various trades, subcontractors, vendors, etc., for correction of defective work and/or work not in accordance with Contract Documents, to minimize Owner disruption.
 - 3. Assemble and coordinate closeout submittals specified in Section 017700 – CLOSEOUT PROCEDURES.
- B. Construction Interfacing and Coordination: Layout, scheduling and sequencing of Work shall be solely Contractor 's responsibility. Contractor shall bring together the various parts, components, systems and assemblies as required for the correct interfacing and integration of all elements of

Work. Contractor shall coordinate Work to correctly and accurately connect abutting, adjoining, overlapping and related elements, including work under separate contracts by Owner and utility agencies, if any.

- C. Installation of Systems into Project Space: Follow routings shown for pipes, ducts and conduits as closely as practicable, as shown on the Contract Documents with due allowance for available physical space; make runs parallel with line of building. Utilize space efficiently to maximize accessibility for other installations, future maintenance and repairs. In finished areas, except as otherwise shown, conceal pipes, ducts and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- D. Utility Work: Work occurring on or in the immediate vicinity of critical utilities must be directly supervised at all times by Contractor qualified personnel. Requirements stated herein for notification, work plans, dig notification forms and marking locations of existing utilities shall apply. Contractor will be held fully liable for costs and damages due to unplanned interruption of critical utilities, including any personal injury to public, visitors, or staff.
 - 1. Provide supervision and coordination necessary to meet requirements of electrical power connection as set forth by the Pacific Gas and Electric (PG&E).
 - 2. Provide reasonable and convenient staging and access areas to permit PG&E, its vendors or subcontractors, to install, modify or remove electrical transformers or other components of the electrical power system furnished and installed by PG&E.

1.06 COORDINATION OF SUBCONTRACTORS AND SEPARATE CONTRACTS

- A. Conflicts: Conflicts shall be resolved by the Contractor bears primary responsibility for conflict resolution regarding the coordination of all building trades, subcontractors, and suppliers.
- B. Superintendence of Work: Contractor shall appoint a field superintendent who shall direct, supervise, and coordinate all Work in the Contract Documents.
- C. Subcontractors, Trades and Materials Suppliers: Contractor shall require all subcontractors, trades, crafts and suppliers to coordinate their portions of Work with the Superintendent to prevent scheduling, sequencing, dimensional and other conflicts and omissions.
- D. Coordination with Work Under Separate Contracts: Contractor shall coordinate and schedule Work under Contract with work being performed for Project under separate contracts by Owner. Contractor shall make direct contacts with parties responsible for work of the Project under separate contracts, in order to provide timely notifications and to facilitate information exchanges.
- E. Service Connections: Except as otherwise indicated, final connection of mechanical services to general work is defined as being mechanical work; final connection of electrical services to general work is defined as electrical work.

1.07 OWNER CRITERIA

- A. During the Base Construction time, Contractor shall allow Owner 14 calendar days to move Owner equipment and/or provide furnishings. Contractor shall notify Owner's Representative in writing a minimum of fourteen (14) calendar days prior to completion of area described above.
 - 1. Contractor shall show this time as a distinct activity on the detailed project schedule.

- B. Equipment Coordination: Contractor and Owner supplied equipment will require complete installation data be exchanged directly between Contractor and vendors and subcontractors involved as progress of Project requires. Individual requesting information shall advise when it is required. Incorrect, incomplete, delayed or improperly identified equipment causing delay or error in installation will require entity causing such action to be liable for modifications or replacements necessary to provide correct and proper installation, including relocations.
- C. Contractor shall provide large scale casework and equipment drawings for casework and equipment service rough-in locations (dimensioned from building features), service characteristics, and locations of studs or blocking where such locations are critical to mounting or otherwise installing equipment and casework. Furnish sizes and spacing required for mechanical and electrical cutouts, and a complete brochure of fittings, sinks, outlets, or other information to provide a complete assemblage of the items and accessories being furnished.
- D. Interruption of Services: Construction Work shall accommodate Owner's use of surrounding and adjacent premises during the construction period and shall provide continuous public access and use of surrounding and adjacent facilities. Contractor shall not deny access to public use facilities until an alternate means of public use has been provided. An interruption of service is defined as any event which in any way interrupts, disrupts or otherwise discontinues, even momentarily, the services provided by Owner to its patients and staff. Adequate notice, as described below, shall be given to Owner when any interruption of services or interference with the use of existing buildings and roads are anticipated. Any interruption of service will be made only by Owner upon such notice. Interruptions to Owner services will not be made without prior notification and approval by Owner. Contractor shall never interrupt any Owner service without direct Owner participation.
1. Dig Notification: Contractor shall complete and submit for review to Owner's Representative, a Dig Notification Form, included at the end of this section, and obtain written authorization from Owner prior to the commencement of any digging activities. Digging activities include exploratory demolition, soils excavation, concrete core drilling, and saw cutting. Contractor shall include all pertinent information with the Dig Notification Form and submit with detailed work plan fourteen (14) calendar days prior to desired digging activity.
 2. The Contractor shall contact USA North 811 prior to starting underground Work to locate existing underground utilities.
 3. Contractor shall mark locations of all known utilities on ground of dig area with marker paint.
 4. Prior to commencement of digging activities, Contractor shall verify project inspector has inspected the dig site and confirmed the site marking as accurate, complete and in conformance with site utility plans.
 5. Contractor shall verify with Owner's Representative that all interested hospital departments have been notified of intent to begin digging operation.
 6. Record documents are required for dig activities. Contractor shall provide As-Built drawings.
- E. Shutdown Procedures: Contractor shall complete and submit for review and approval to Owner a Request for Shutdown form, included at the end of this section. Contractor shall include all pertinent

information to assist Owner in coordination of shutdown activities. The Shutdown Request Form shall be submitted with a detailed work plan addressing the proposed shutdown not less than fourteen (14) calendar days prior to desired shutdown.

- F. The Owner does not normally charge for its shutdown support services. However, if poor planning and/or poor execution of a shutdown by the Contractor causes excessive time and effort for Owner personnel, the Owner reserves the right to back charge the Contractor for this effort required to support such shutdown.
1. Contractor shall verify with Owner's Fire Marshal that all appropriate Interim Life Safety Measures (ILSM) are in place.
 2. Contractor shall determine that proper and appropriate coordination and notification has been completed, including written authorization from Owner's Representative, prior to shut down.
 3. Service shutdowns shall require specific work plans to be submitted to and coordinated with Owner's Representative. Work Plan should reflect various work trades, activities or entities requiring active participation with Owner teams to coordinating hospital functions with construction activities.
 - a. Contractor shall request, schedule, and conduct a General Work Plan Meeting prior to any work activity occurrence. During this meeting Contractor and Owner shall produce and agree to a list of work activities, which will require digging and/or shutdown coordination and procedures.
 - b. Owner's Representative, upon receiving the agreed submission for coordination, shall schedule the actual digging and/or shutdown at the earliest possible date not later than fourteen (14) calendar days from receipt of the submission. Operation of valves, switches, etc. to affect shutdowns shall be operated by Owner personnel only.
 - c. A shutdown is defined as any interruption of services provided by Owner to its patients and staff.
 4. Planned service shutdowns shall be accomplished during periods of minimum usage. Contractor shall plan work to restore service in minimum possible time and shall cooperate with the Owner to reduce number of shutdowns.
 - a. Notwithstanding the provisions of Article 14.6 of the General Conditions of the Contract, Contractor may be required to perform certain types of work outside normal time periods.
 - 1) Non-normal times shall include, but not be limited to, periods of time before 7:00 a.m. and after 5:00 p.m. in the evening, weekend days, or legal holidays, or such periods of time which constitute split shifts or split working periods.
 - 2) Contractor shall include allocation of the cost of this work as part of the base bid and shall not be entitled to additional compensation as a result of such work during non-normal time periods.
 - 3) Contractor shall include the non-normal periods as distinct activities on the detailed project schedule.

- 4) Contractor is advised and Contractor shall be prepared, at Owner written request, to perform certain shutdown and asbestos related work during non-normal time periods.
- G. Utility locations: Refer to Section 017600. General location of utility lines and services may be shown on the drawings or described elsewhere, Owner does not warrant the accuracy of the locations shown or described. Determination of the actual on-site locations of utility lines and services prior to the commencement of work shall be the responsibility of the Contractor shall complete layout/research for Points of Connection (P.O.C.) and clean/prep piping at P.O.C. All capping, relocation or removal of such lines and services shall be performed by Contractor as a part of the Contract. New/continued piping and services installation shall be prefabricated and in place prior to the shutdown. All materials and tools required to complete the work must be at the shutdown location(s). Contractor shall not assume existing valves will hold 100%. Contractor is required to have at least one (1) alternate method (including parts and equipment) to complete installation once shutdown has started. Note: only wheel type cutters shall be used on copper pipe to reduce contamination to existing systems/valves.
- H. Detailed Work Plans: Contractor shall develop and submit for review and approval to Owner's Representative detailed work plans for specific work activities, both inside and outside the work area, associated with impact to, or interruption of services and operation, and dig activities. Work Plans shall be submitted as a PDF electronic file with Table of Contents indexed. Work Plans shall include written description of work activity, detailed schedule with proposed sequence of operation and activity duration, type of equipment to be used, a copy of site plan highlighted to indicate sequencing and location of work and equipment, completed Request for Shutdown and/or Dig Notification forms as applicable, conformance to ILSM, and control methods for noise, vibration and airborne contaminants.
1. Work Plan submittal will not be accepted unless all required information is provided at time of submittal.
 2. Submit Work Plan at least fourteen (14) calendar days prior to the commencement of any associated work activities.
 3. Coordination/Engineering Drawings: Contractor shall provide a complete set of Coordination/Engineering Drawings that indicates the architectural and structural building components; and combines all piping, conduits, fire sprinkler system, equipment, hangers, braces and other building components into one composite drawing for each floor, wing or area of work. Submit the Coordination/ Engineering Drawings as a bookmarked PDF electronic file. These drawings are for the Contractor's and Owner's use during construction and shall not be construed as replacing any shop drawings, "As-Builts", or record drawings required elsewhere in the Contract Documents. Owner's review of these drawings is for design intent only and shall not relieve the Contractor of the responsibility for coordination of all work performed per the requirements of the Contract.
 - a. Contractor shall prepare and submit complete $\frac{1}{4}" = 1' - 0"$ coordination drawings, including plans, sections, details as are appropriate indicating the area layout, complete with debris removal area and materials access points, and all mechanical and electrical equipment in all areas and within above and below ceiling spaces for new and existing conditions, including bottom of all ducts, plenum, pipe and conduit elevations. Drawings shall show all structural and architectural

components, restraints and other obstructions that may affect the work. Electronic or photo reproduction of Owner's Architectural Drawings is not acceptable.

- b. Contractor and each Subcontractor shall ensure all relevant mechanical and electrical equipment, piping, conduit, fire sprinkler system, ceiling hangers, braces etc., are shown and will fit, together with necessary items such as lights, ducts, fans, pumps, piping, conduit and the like.
- c. Contractor shall indicate all locations of expansion/ seismic joints and indicate how expansion for piping, conduit and other components is provided.
- d. Contractor shall indicate all locations for access doors or other means of access at conditions above and below for items requiring access or service including but not limited to valves, mechanical equipment, electrical equipment valves and other components. The Contractor is responsible that piping, conduit, braces and other obstructions do not block access to items indicated above.
- e. Submit completed and fully coordinated PDF electronic indexed file drawings with bookmarked Sheet Index together with Contractor comments indicating possible areas of conflict for review to Owner's Representative prior to start of work.
- f. Penetrations: Contractor shall prepare a sleeving layout (1/4" scale) indicating size and locations of sleeves. Trades shall indicate to Contractor their requirements and locations. PDF electronic files to applicable trades and Owner's Representative.
- g. Completion of work: All coordination drawings shall be submitted together with record (as built) drawings of all trades involved in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Request for Shutdown (RFS) Info/Impact Report
- B. Dig Notification Form

END OF SECTION 01 31 00

REQUEST FOR SHUTDOWN (RFS) INFO/IMPACT REPORT

PROJECT NAME: _____

OWNER RFS# _____

PROJECT #: _____ HCAI #: _____ CONTRACTOR RFS #: _____

TODAY'S DATE: _____ SHUTDOWN DATE: _____ SUSPEND DATE: _____

TO: COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 <u>Project Manager's email address:</u> <u>Joseph.Cooper@lakecountycalifornia.gov</u>	FROM:
---	---

Request Date: _____ Shutdown Target Date: _____

Requested By: _____ Requestor's Phone #: _____

Shutdown Work (Utility Specific): _____

Scope (Brief Description of Work): _____

Impact (Areas & Users): _____

Additional Comments: _____

DIG NOTIFICATION FORM

PROJECT #: _____ HCAI#: _____ DATE: _____

TO: COUNTY OF LAKE	FROM:
--------------------	-------

PUBLIC SERVICES
333 2nd Street
Lakeport, CA 95453

P:707-262-1618
C:707-245-6911

Project Manager's email address:
Joseph.Cooper@lakecountycalifornia.gov

1. Has USA been notified? YES ___ NO ___
When?

2. Are all known utilities marked? YES ___ NO ___

3. Location of dig shown on attached site plan? YES ___ NO ___
Purpose

4. Dates digging will take place _____
Place _____

Signed:

OWNER USE ONLY

Date received:

1. Utilities verified by IOR? YES ___ NO ___

2. Dig activities coordinated with all parties? YES ___ NO ___

3. Comments:

Date Authorized: _____ Signed: _____ Date _____ Returned: _____

Signed:

Comments: (Utilities encountered, disruptions, successes, weather, etc.)

Copies:	Owner _____	Consultants _____	File _____

SECTION 01 32 00

CONTRACT SCHEDULES

PART I - GENERAL

1.01 SCOPE

- A. Preliminary Contract Schedule, Contract Schedule, updated Contract Schedules, Short Interval Schedules (SIS), Recovery Schedules and As Built Schedule.
- B. Sub-networks of activities (Fragnets) supporting Time Extension Requests.

1.02 DEFINITIONS

- A. Construction Schedule/CPM Schedule/Schedule: The most recent; Baseline Schedule, Updated Schedule or Revised Schedule.
- B. Final Baseline Schedule: A final and ongoing Schedule for the project that has been reviewed and accredited by the Owner's Representative
- C. Critical Work activities are defined as Work activities that, if delayed or extended, will cause a critical delay as defined in General Conditions Article 8. All other Work activities are defined as non-critical Work activities and are considered to have float.
- D. Float is defined as the time that a non-critical Work activity can be delayed or extended without causing a critical delay as defined in General Conditions Article 8. Neither the Contractor nor the Owner shall have an exclusive right to the use of float. Float is a shared resource available to each party to the contract. The Contractor shall document the effect of the use of float on the updated Contract Schedule.
- E. Recovery Schedule: Schedule required when any Revised Schedule or Update Schedule shows the work to be more than 14 calendar days behind the latest Owner-accepted contract end date.
- F. Short Interval Schedule (SIS): Schedule prepared on a weekly basis demonstrating the work accomplished the prior week and work planned for the upcoming three weeks.

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples:
 - 1. Proposed Scheduling Software and qualifications of individual preparing schedules.
 - 2. Preliminary Contract Schedule
 - 3. Contract Schedule including graphical and tabular reports.
 - 4. Monthly Updates to Contract Schedule, including Narrative Report.

5. Short Interval Schedules
 6. Final As-Built Schedule
- B. Include an electronic version of all submittals required by this specification, including Narrative prepared in MS Word or .pdf format, CPM schedule in .xer file (P6 backup) or other schedule native file format if accepted under 1.3. A.1 above, .pdf of full schedule, and .pdf of critical path. The following fields shall be included:
1. Activity identification
 2. Activity description
 3. Duration, start, and finish dates.
 4. Percentage of completion
 5. Total float
 6. Responsible party
 7. Predecessors and successors

PART II - PRODUCTS

2.01 SOFTWARE

- A. The Contractor shall use Primavera P6 by Oracle Corporation, or equal to produce the schedule and all required graphical and tabular reports.

PART III - EXECUTION

3.01 PRELIMINARY CONTRACT SCHEDULE

- A. Within 10 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall submit the Preliminary Contract Schedule in both native and .pdf format to the Owner's Representative for acceptance. The Preliminary Contract Schedule shall represent the Contractor's plan for accomplishing the work within the Contract time showing all significant milestones for the Contract period as well as a detailed work plan for the first 90 calendar days following the Notice to Proceed. This detailed work plan shall identify in detail the following activities for the first 90 calendar days:
1. Preparation of equipment and material submittals for review. List Project submittals within Schedule per each specification section including Division 1 requirements. Indicate dates for submission of required submittals. Note: schedule shall include 18 calendar days for the Owner's review of the Preliminary Contract Schedule.
 2. Make submissions within the following number of days after the Notice to Proceed:
 - a. Items needed in initial stages of Work or requiring long lead-time for ordering: 30 calendar days.

- b. Deferred approval submittals, for review and approval by agencies such as Owner's when required: 60 calendar days.
 - c. Electrical, mechanical and equipment items other than those covered by item "a" above: 60 calendar days.
 - d. All other items: 90 calendar days.
 - 3. Procurement schedule.
 - 4. Critical Path for the first 90 calendar days.
 - B. The Preliminary Contract Schedule shall acknowledge significant known constraints and include all anticipated activities prior to the Notice to Proceed.
 - C. The Preliminary Contract Schedule shall not include any actual dates or progress measured against any activities.
 - D. Acceptance of the Preliminary Contract Schedule is a condition for approval of the first progress payment application.
 - E. The Contractor's progress shall be measured against the Preliminary Contract Schedule until such time as the Owner accepts the Contractor's first Contract Schedule. The Preliminary Contract Schedule shall be incorporated into the Contractor's proposed Contract Schedule.
 - F. Unless approved by the Owner's Representative, there shall be no activities shown with durations greater than 14 calendar days (excluding submittals, submittal reviews, and procurement activities).
- 3.02 CONTRACT SCHEDULE (BASELINE)
- A. The Contract Schedule shall represent a practical plan to fully complete the Contract within the Contract Time. The Contract Schedule shall include a complete sequence of construction, in adequate detail for coordination of the Work and shall be coordinated with the preparation of the Schedule of Values per 01 29 00 Measurement and Payment.
 - B. Form
 - 1. The proposed first contract schedule shall be produced using CPM (Critical Path Method) techniques, in the PDM (Precedence Diagram Method) method of scheduling. The Contract Schedule shall be calculated using the Retained Logic method. Progress override calculations shall not be acceptable. The schedule shall not use negative float or constraints on work activities.
 - 2. The Contract Schedule shall identify all holidays and non-working days.
 - 3. Identity of the party responsible for the activity (i.e., Owner, General Contractor, specific subcontractor, etc.)
 - 4. The Contract Schedule activities shall be coded with the following information applicable to each activity:

- a. Area of the project
- b. Identity of the party responsible for the activity (i.e., Owner, General Contractor, specific subcontractor...)
- c. Specification section applicable to activity
- d. Phase
- e. Sequence – The following sequences shall be identified:
 - 1) Administrative
 - 2) Submittal and Review
 - 3) Fabrication
 - 4) Construction: including phasing and sequencing as identified in 011400 Work Restrictions
 - 5) Inspection, Commissioning, and Close-out

C. Content

1. The Contract Schedule shall identify all Work activities in correct sequence for the completion of the Work within the Contract Time. Work activities shall include the following:

- a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or Owner's Representative's prior acceptance.
 - 1) Show dates for the submission, review, and approval of each such submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by the Owner.
 - 2) The schedule shall allow submittal review time in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples.
- b. System test dates.
- c. Scheduled overtime Work to the extent permitted by Contract Documents.
- d. Dates Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the Owner.
- e. Dates Contractor requests orders and decisions from the Owner on designated items.
- f. Dates Contractor requests Owner-furnished equipment.

- g. Dates Contractor requests Owner-furnished utilities.
 - h. Planned dates for shutdown, connection, and relocation of existing utilities.
 - i. Planned dates for connecting to or penetrating existing structures.
 - j. Planned dates for scheduled inspections as required by Codes, or as otherwise specified.
 - k. Commissioning Sequence and activities for all Building Systems.
- 2. Unless approved by the Owner's Representative, there shall be no activities shown with durations in excess of 7 calendar days (excluding submittals, submittal reviews, and procurement activities). Milestones should be listed for the completion of wings, floors, and other similar areas.
 - 3. The allowable monthly rain days per the Supplemental Conditions shall be incorporated into the Schedule.
 - 4. Identify types of calendars used and the logic of their application.

D. Submission

- 1. The first Contract Schedule shall be submitted to the Owner not later than 30 calendar days after Notice to Proceed. The period covered by Contract Schedule shall be the Contract Time as specified in the Notice to Proceed. The Contract Schedule shall incorporate the logic of the Preliminary Contract Schedule covering the first 90 calendar days following the Notice to Proceed. Items to be included with first submission:
 - a. Contract Schedule (Baseline)
 - b. Critical Path Schedule excluding all non-critical Work activities.
 - c. Narrative
- 2. Tabular Computer Reports
 - a. As requested by the Owner, the Contractor shall submit various computer-generated tabular reports.
 - b. As requested by the Owner's Representative, the Contractor will be required to submit additional Schedule Reports.

E. Acceptance

- 1. Upon receipt, the Owner's Representative shall review the proposed first Contract Schedule. Within 21 calendar Days of the Owner's receipt of the proposed first Contract Schedule, the Owner's Representative shall schedule a review meeting with the Contractor for the purpose of jointly reviewing the proposed first Contract Schedule.

2. If the proposed first Contract Schedule is accepted by the Owner's Representative, it shall become the Contract Schedule (or Baseline Schedule). Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the Contract Schedule.
3. If the Contractor or the Owner's Representative determines the proposed first Contract Schedule to need revision, the Contractor shall revise and resubmit the proposed first contract schedule to the Owner's Representative within 14 calendar days for acceptance. If accepted, it shall become the Contract Schedule. Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the Contract Schedule. If not accepted the Contractor will resubmit within 10 calendar days for a new review period to start.
 - a. No progress payment beyond the second progress payment will be paid to the Contractor until such time as the Owner's Representative has approved the Contractor's first proposed Contract Schedule.

F. Schedule Logic

1. Activity schedule logic should normally be of Finish-to-Start relationship type and assembled to show order in which Contractor proposes to carry out the Work. The logic should indicate restrictions of access, availability of Work areas, and availability and use of manpower, materials, and equipment. Form basis for assembly of schedule logic on the following criteria:
 - a. Indicate which activities must be completed before subsequent activities can be started.
 - b. Indicate which activities can be performed concurrently.
 - c. Indicate which activities must be started immediately following completed activities.
 - d. Indicate resource sequencing due to availability or space restrictions.
 - e. Lags shall not be used if can be represented with additional schedule detail. Finish-to-start logic ties with positive lags are not permitted. All positive time consumption should be represented by a schedule activity. Start-to-start, or finish-to-finish logic ties with negative lags are not permitted.
 - f. Lags in Start-to-Start or Finish-to-Finish relationships must not exceed the duration of the predecessor or successor activity, respectively.

G. Non-Sequestering of Float

1. Contractor shall not sequester float through scheduling techniques, including, but not limited to, constrained dates, extending Work Activity duration estimates, using preferential logic, such as lag or negative lag (lead), unless specifically requested in writing and approved by Owner's Representative. It is acknowledged that Owner-caused or Contractor-caused time

savings to Activities on, or near, the critical path will increase float, such increase in float shall not be for the exclusive use or benefit of either Owner or Contractor.

H. Out of Sequence Logic:

1. Resolution of conflict between actual work progress and schedule logic: When out of sequence activities develop in Schedule because of actual construction progress, Contractor shall submit revision to schedule logic to conform to current status and direction and include reasons in schedule update Narrative.

I. Preferential Logic:

1. The intended purpose of scheduling on a construction project is to help ensure that Contractor's work on the project is adequately planned, tracked and managed. A construction schedule can be as simple as a list of activities, organized in a logical sequence, and time scaled. The concept of construction scheduling is to see that all activities necessary to complete the work, in accordance with the contract documents requirements, are properly planned, coordinated and managed. When Contractor's schedule activities are not sequenced in the most logical manner, but rather, in a manner as to create the maximum possible opportunity for Owner interference to claim delay or interruption, the Owner will reject the schedule with a request of different sequence of activities.

3.03 EXPERIENCE REQUIREMENTS

- A. Contractor shall designate an individual from Contractor's staff or a consultant who shall be responsible throughout the duration of the project for preparation of all schedules and reports as required by this specification. This individual shall also be required to attend all meetings with the Owner's Representative as required by this specification. The Contractor shall demonstrate to the satisfaction of the Owner that the individual or consultant has at least 3 years of experience preparing, maintaining, and administering detailed project schedules on projects of the same or similar size and complexity as this project. The Contractor shall also demonstrate to the satisfaction of the Owner that the individual or consultant is proficient in the use of the scheduling software proposed for use by the Contractor on this project.
- B. Within 14 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall provide the Owner with the identification, qualifications, and experience of and references for the proposed individual or consultant.

3.04 MONTHLY UPDATES

- A. After acceptance of the first proposed Contract Schedule, Contractor shall update the Contract Schedule monthly. The update shall reflect progress as of the end of each month. Contractor shall submit monthly schedule update to the Owner's Representative for acceptance with the draft payment application and no later than the tenth day of the following month. The updates shall be made as follows:
 1. The Monthly updates shall report progress based upon percent complete of each activity or remaining duration. Actual start dates shall be recorded for those activities that have started. Actual finish dates shall be recorded for those activities that are completed. Activities that are in progress shall reflect an actual start date and the percentage completion for the activity. Actual dates shall be clearly distinguishable from projected dates.

2. The updated Contract Schedule shall reflect an up-to-date status of the contract work as completed, and materials furnished and in permanent place that qualify for payment.
 3. The updated Contract Schedule shall reflect Contract Time changes included in all processed change orders for the progress month and each preceding month.
- B. Within 5 calendar days after receipt of the updated Contract Schedule in conjunction with the Application for Payment, the Owner's Representative shall review both and determine which work and material pay items qualify for payment; the approved data will then be returned to the Contractor for input. Within 14 calendar days, the Contractor and the Owner's Representative shall meet to review the Construction CPM Schedule and discuss any changes required.
- C. The Contractor shall then revise and resubmit (if required) the Updated Contract Schedule and Application for Payment to the Owner's Representative for payment approval.
- D. The monthly update shall be calculated using retained logic with a required finish date specified as the current contract completion date. Progress Override calculations shall not be acceptable.
- E. No Applications for Payment will be processed, nor shall any progress payments become due until updated Contract Schedules are accepted by Owner's Representative. The accepted, updated Contract Schedule shall be the Contract Schedule of record for the period it is current and shall be the basis for payment during that period. Acceptance of any updated Contract Schedules shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the updated Contract Schedules.
- F. Contractor shall perform the Work in accordance with the updated Contract Schedule. Contractor may change the Contract Schedule to modify the order or method of accomplishing the Work only with prior agreement by the Owner.
- G. With each monthly updated Contract Schedule, the Contractor shall provide an accompanying narrative describing the progress anticipated during the upcoming month, critical activities, delays encountered during the prior month, delays anticipated during the upcoming month, and an audit of the Contract Time. The audit shall show current days allowed by contract, days used through the end of the month, days remaining, percent of time used to date, and percent complete as measured by cost loaded schedule, and days ahead of or behind schedule. In the event that the Contractor was delayed by any occurrence during the prior month, the narrative report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an accounting of days lost or gained.
- H. In the event the monthly update shows the Contractor to be behind schedule (negative float), the narrative shall include a description of actions needed to bring the project back on schedule.

3.05 LOOK AHEAD SCHEDULES

- A. Look Ahead Schedule is a schedule derived from the Contract Schedule (or the most current monthly update of the Contract Schedule) which indicates in detail all activities scheduled or worked on for the 1 prior weeks, and all activities scheduled to occur during the next 3 weeks.
- B. Provide detailed Look Ahead Schedules every week.

- C. Submit in 11-inch by 17-inch Gantt chart format.
- D. Look Ahead Schedule shall be generated from the then current Preliminary Contract Schedule, Contract Schedule, or updated Contract Schedule. Activities listed in the Look Ahead Schedule shall reference the activity identification or other such coding for correlation to the activities listed in the Contract Schedule.

3.06 TIME EXTENSION REQUEST DOCUMENTATION

- A. In the event the Contractor shall request an extension of Contract Time, Contractor shall comply with the requirements of the General Conditions, including without limitation, General Conditions Article 8. In addition to the requirements of the General Conditions, as a condition to obtaining an extension of the Contract Time, Contractor shall timely submit a sub-network of the events of the delay that demonstrates the impact to the activities in the Contractor's then current schedule, as well as the impact to the overall completion date of the project.
- B. If the Owner's Representative approves the extension of time, the next monthly updated Contract Schedule shall incorporate the subnetwork with the extension of time. In addition, the monthly updated Contract Schedule shall contain all changes mutually agreed upon by the Contractor and the Owner during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.

3.07 AS BUILT SCHEDULE

- A. As a condition precedent to the release of retention, the last update of the Contract Schedule submitted shall be identified by the Contractor as the "As Built Schedule". The "As Built Schedule" shall be submitted when all activities are 100 percent complete. The "As Built Schedule" shall reflect the exact manner in which the project was actually constructed (including start and completion dates, activities, sequences, and logic) and shall include a statement signed by the Contractor's scheduler that the "As Built Schedule" accurately reflects the actual sequence and timing of the construction of the project.

3.08 WEATHER DAYS ALLOWANCE

- A. Should inclement weather conditions, or the conditions resulting from weather, prevent the Contractor from proceeding with seventy-five (75) percent of the normal labor and equipment force engaged in the current critical activity item(s), (as shown on the latest CPM Progress Schedule accepted by the Owner's Representative), for a period of at least five (5) hours per day toward completion of such operation or operations, and the crew is dismissed as a result thereof, it shall be a weather delay day.
- B. The expected loss of days specified in the Supplementary Conditions, item 3 "Modification of General Conditions, Article 8 – Contract Time", shall be included in a separate identifiable critical activity labeled "Weather Days Allowance" to be included as the last critical activity of the project schedule prior to substantial or final completion (whichever is contractual). The weather allowance activity shall be on, and remain on, the critical path of the project throughout the life of the project until it has been absorbed. Typically, all activity's leading to completion shall go through the weather allowance activity first. When weather days are experienced, and are approved as such by the Owner's Representative, the Contractor shall either:
 - 1. Increase the duration of the current critical activity(ies) by the number of weather days experienced, or
 - 2. Add a critical activity to the schedule to reflect the occurrence of the weather day(s).

- C. The duration of the weather day allowance activity shall be reduced as weather days are experienced and included in the schedule. Any remaining weather days in the weather day allowance activity at the completion of the project shall be considered as float and shall not be for the exclusive use or benefit of either the Owner or Contractor.
- D. The Contractor shall not receive any additional compensation for unavoidable delays due to inclement or unsuitable weather. If all the weather allowance has been used, any additional weather delay experienced by the Contractor may result in a non-compensable time extension upon submission of acceptable supporting documentation to the Owner's Representative.

END OF SECTION 01 32 00

SECTION 01 33 00

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Administrative requirements for shop drawings, product data and samples submittals
- B. Owner's and Owner's Consultant's review of submittals
- C. Contractor's review of submittals
- D. Shop Drawing Submittals
- E. Product Data submittals
- F. Sample submittals
- G. Field Samples and mock-ups
- H. Submittal Schedule requirements

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK: Subcontractor and materials suppliers list.
- B. Section 013200 – CONTRACT SCHEDULES: Submission and review of schedules and submittals.
- C. Section 014500 – QUALITY CONTROL: Test and Inspection Reports.
- D. Section 016100 - PRODUCT REQUIREMENTS
- E. Section 017700 – CLOSEOUT PROCEDURES: Occupancy/Acceptance /Final Payment Submittals.
- F. Section 017800 – CLOSEOUT SUBMITTALS: Preparation of Maintenance and Operating Data.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. General Submittals Review: Submittals shall be made in accordance with requirements specified herein and in individual Sections.
 - 1. Submittals shall be a communication aid between Contractor, Owner's Representative, and Owner's Consultant(s) by which interpretation of Contract Documents requirements may be confirmed in advance of construction.
 - 2. Submit on all products to be used on the Project. Make all submittals through the Owner unless otherwise directed.

- a. The Owner's Representative shall provide timely review of submittals and re-submittals.
 - 1) Owner's Representative shall have twenty-one (21) days from receipt to review all submittals twenty-one (21) days from receipt to review re-submittals.
 - 2) The Fire Marshal shall have twenty-eight (28) days from receipt to review all submittals twenty-eight (28) days from receipt to review re-submittals.
 - 3) Owner's Representative will prepare and keep a log of review time of all submittals.
 3. Substitutions shall be submitted in accordance with Section 016100 – PRODUCT REQUIREMENTS.
 4. Make submittals sufficiently in advance of construction activities to allow shipping, handling and review by the Owner's Representative and their consultants.
- B. Owner's and Owner's Consultants Review: Owner's Consultant's review will be only for general conformance with the design intent of the Contract Documents. Review of submittals is not conducted for purpose of determining accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. Review actions of the Owner's Consultant or Owner shall not relieve Contractor from compliance with requirements of the Contract Documents. Changes shall only be authorized by separate written Change Order in accordance with the General Conditions of the Contract.
- C. Contractors Review: Contractor shall review, mark-up as appropriate and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittal shall clearly show it has been reviewed by Contractor for conformance with the Contract Documents and for coordination with requirements of the Work. Notify Owner's Representative in writing, at time of submission, of any changes in the submittals from requirements of Contract Documents.

1.04 SUBMITTAL REQUIREMENTS

- A. Prompt Submission: Submittals shall be submitted promptly in accordance with Submittal Schedule and in such sequence as to cause no delay in the Work or in the work of any separate contractor. Present information in a clear and thorough manner to aid orderly review.
- B. Preparation: Title each submittal with the Owner's Project Name and the Owner's Project number, submittal date and dates of any previous submissions. Clearly mark each copy to identify product or model.
1. Identify each item on submittal by reference to Drawing sheet number, detail, schedule, room number, assembly or equipment number, Specification number Reference Standard (such as ASTM or Fed Spec Number) and other pertinent information to clearly correlate submittal with Contract Documents.
 2. Include the names of the Contractor, Subcontractor, Supplier and Manufacturer.

3. Include field dimensions, clearly identified as such to establish relationship to adjacent or critical features of the Work or materials.
4. Include pertinent information such as performance characteristics and capacities, wiring or piping diagrams and controls, catalog numbers and similar data.
5. Modify manufacturer's standard schematic drawings and diagrams and other diagrams to delete information not applicable to the Work. Supplement standard information to provide information specifically applicable to the Work.
6. Identify changes from requirements of the Contract Documents.
7. Include 8" x 3" blank space on face of submittal for review stamps.
8. Include Contractor's review stamp, initialed or signed, and dated, certifying to the review of the submittal, verification of materials, field measurements, conditions, and compliance of the information within the submittal with the requirements of the Work and of the Contract Documents. C. Number of submittals required:
 1. Product Data Submittals: Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
 2. Initial/Re-submitted Shop Drawing Review(s): Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
 3. Final Shop Drawing Review and Approval: After obtaining Owner's Representative approval of initial/re-submitted shop drawing submittals, as described in Section 1.04.C.2 above, Contractor shall submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies. Contractor is responsible for providing all approved shop drawings for its use and use by subcontractors and/or suppliers.
 4. Samples: Submit number specified. Samples shall be of sufficient size and quality to clearly illustrate the functional characteristics of the products, with integrally related parts and attachment devices, including full range of colors, textures and patterns.

D. Identifying Submittals: Identify each submittal by Specification section number followed by a number indicating sequential submittal for that Section. Re-submittals shall use the same number as the original submittal, followed by a letter indicating sequential re-submittal. Examples:

- | | | |
|----|-------------|---|
| 1. | 092500 – 1 | First submittal for Section 092500 – Gypsum Board |
| 2. | 092500 – 2 | Second submittal for Section 092500 – Gypsum Board |
| 3. | 092500 – 2A | Re-submittal of second submittal for Section 092500 – Gypsum Board |
| 4. | 092500 – 2B | Second re-submittal of second submittal for Section 092500 – Gypsum Board |

- E. Resubmission Requirements: Revise and resubmit as specified for initial submittal. Identify any Changes other than those requested. Note any departures from Contract Documents or changes in previously reviewed submittals.
- F. Grouping of Submittals: Unless otherwise specifically permitted by Owner's Representative, make all submittals in groups containing all associated items as described

in each Specification Section. The Owner's Representative will reject partial submittals as incomplete.

G. Unsolicited Submittals: Unsolicited submittals will be returned NOT REVIEWED.

1.05 DISTRIBUTION

A. Reproduce and distribute finalized copies of Shop Drawings and Product Data, to the following:

1. Contractor's Project site file.
2. As-built Documents file maintained by Contractor.
3. Pertinent Separate Contractors.
4. Pertinent Subcontractors.
5. Pertinent Supplier or Manufacturer.

1.06 FIELD SAMPLES AND MOCK-UPS

A. Erect at the project site, at a location directed by Owner's Representative, mock-ups to a size as specified.

1. The following mock-ups are required for this project: As defined in Construction Drawings and Specifications.

B. Fabricate each Sample and mock-up to be complete and fully furnished. Unless otherwise agreed, full-size complete samples will be returned and may be incorporated into field mock-ups and Work.

C. Mock-ups shall be removed by the Contractor at conclusion of the Work at no additional cost to the Owner.

1.07 SUBMITTAL SCHEDULE

A. Submittals Schedule: refer to Section 013200 – CONTRACT SCHEDULES.

1. The Submittal Schedule is a schedule for submission of Shop Drawings, Product Data and Samples by Contractor, and the processing and return of same by Owner.
2. Contractor shall prepare the Submittal Schedule as described herein and coordinate it with the Contract Schedule. No submittals will be processed before the Submittal Schedule has been submitted to and accepted by Owner.
3. Submittal Schedule shall be adjusted to meet needs of construction process and the Contract Schedule. Submit PDF electronic file with booked marked table of contents and/or sheet index of the Submittal Schedule after it is completed and each time it is update by Contractor.
4. Contractor shall NOT begin fabrication or Work which requires submittals until the return of final reviewed and approved submittals have been received by the Contractor.

1.08 ENVIRONMENTAL PRODUCT DECLARATIONS

- A. Contractor must comply with Buy Clean California Act requirements per California Public Contract Code, Sections 3500-3505.
- B. Contractor shall submit to Project Manager/Construction Manager current facility-specific Environmental Product Declaration for each eligible material proposed to be used on the Project.
- C. Environmental Product Declaration (EPD): Type III environmental impact label, as defined by the International Organization for Standardization (ISO) standard 14025, or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance, and integrity.
- D. Eligible Materials: Any of the following:
 - 1. Carbon steel rebar.
 - 2. Flat glass.
 - 3. Mineral wool board insulation.
 - 4. Structural steel.
- E. Eligible Materials installed on the Project by Contractor must comply with any standards to the extent established in the BCCA or by Owner, whichever is more stringent. The facility-specific global warming potential for any Eligible Materials must not exceed any existing maximum acceptable global warming potential for that material pursuant to the BCCA or by Owner, whichever is more stringent ("EM Standards"). The standards are published on the Department of General Services (DGS) website and updated information can be found on this link: <https://www.dgs.ca.gov/PD/Resources/Page-Content/Procurement-DivisionResources-List-Folder/Buy-Clean-California-Act>
- F. Contractor shall not install any eligible materials on the project before submitting a facility-specific Environmental Product Declaration for that material.
- G. This section shall not apply to an eligible material for a particular contract if the Owner determines, upon written justification published on its Internet website, that requiring those eligible materials to comply would be technically infeasible, would result in a significant increase in the project cost or a significant delay in completion, or would result in only one source or manufacturer being able to provide the type of material needed by the state.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 33 00

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Relationship between Code, Ordinances, Standards and Contract Documents
- B. Applicable Codes, Laws and Ordinances
- C. Project Inspections
- D. Lakeport Fire District Fire Marshal Requirements

1.02 RELATED SECTIONS

- A. Section 013500 – SPECIAL PROCEDURES
- B. Section 014200 – REFERENCES
- C. Section 014500 – QUALITY CONTROL

1.03 RELATIONSHIP BETWEEN CODES, ORDINANCES, STANDARDS AND THE CONTRACT DOCUMENTS

- A. Authority: All codes, ordinances and standards referenced in Contract Documents shall have full force and effect as though printed in their entirety in the Contract Specifications.
- B. Precedence:
 - 1. Where specified requirements differ from requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
 - 2. Where Contract Drawings or Contract Specifications require or describe products or execution of better quality, higher standard or greater size then required by applicable codes, ordinances and standards, the Contract Drawings and Contract Specifications shall take precedence so long as such increase is legal.
 - 3. Where no requirements are identified in Contract Documents, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.04 APPLICABLE CODES, LAWS AND ORDINANCES A.

Building Codes, Laws, and Regulations:

- 1. Work shall meet or exceed the requirements of and be performed in accordance with applicable, adopted code requirements, laws and requirements of all other regulatory agencies, including, but not limited to the following:
 - a. California Code Series - 2022 Edition

- 1) California Administrative Code, California Code of Regulations – Title 24, Part 1
 - 2) California Building Code, California Code of Regulations – Title 24, Part 2, Volume 1& 2
 - 3) California Electrical Code, California Code of Regulations – Title 24, Part 3
 - 4) California Mechanical Code, California Code of Regulations – Title 24, Part 4
 - 5) California Plumbing Code, California Code of Regulations – Title 24, Part 5
 - 6) California Energy Code, California Code of Regulations – Title 24, Part 6
 - 7) Elevator Safety Construction Code, California Code of Regulations – Title 24, Part 7
 - 8) California Historical Building Code, California Code of Regulations – Title 24, Part 8
 - 9) California Fire Code, California Code of Regulations – Title 24, Part 9
 - 10) California Existing Building Code, California Code of Regulations – Title 24, Part 10
 - 11) California Referenced Standards Code, California Code of Regulations – Title 24, Part 12
- b. NFPA Code Series. National Fire Protection Association (NFPA) (as adopted by State agencies)
- 1) NFPA 13 – Standard for the Installation of Sprinkler Systems.
 - 2) NFPA 14 – Standard for the Installation of Standpipe and Hose System
 - 3) NFPA 72 – National Fire Alarm and Signaling Code
 - 4) NFPA 80 – Standard for Fire Doors and Other Opening Protectives
 - 5) NFPA 101 – Life Safety Code
 - 6) NFPA 252 – Standard Methods of Fire Tests of Door Assemblies
 - 7) NFPA 701 – Standard Methods of Fire Tests of Flame Propagation of Textiles and Films
- c. California Code of Regulation Series (embodied in California model codes as noted above)

- 1) Title 8, Industrial Relations
 - 2) Title 17, Public Health (Chapter 7)
 - 3) Title 19, Public Safety
 - 4) Title 21, Public Works
 - 5) Title 22, Social Security
 - 6) Title 24, Parts 1, 2, 3, 4, 5, 9 and 12
 - 7) Title 25, Energy Insulation Standards
- d. Americans with Disabilities Act (ADA) 2010 (Federal Law)
 - e. Rules and regulations of private and public utilities
 - f. American National Standards Institute (ANSI)
 - g. American Society of Testing Materials (ASTM)
 - h. Federal Specifications (Fed. Spec.)
 - i. Underwriters Laboratories
 - j. Traffic controls per California MUTCD requirements
2. All dates to comply with editions adopted and accepted by Owner and Lakeport Fire District (AHJ/FIRE).
 3. Unless otherwise specified, specific references to codes, regulations, standards, manufacturers' instructions, or requirements of regulatory agencies, when used to specify requirements for materials or design elements, shall mean the latest edition of each in effect at the date of submission of bids, or the date of the Change Order, as applicable.
 4. References on Drawings or in Specifications to "code" or "building code" not otherwise identified shall mean the codes specified above, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction having authority over the project. B. Other Applicable Laws, Ordinances and Regulations:
 1. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
 2. Work shall be accomplished in conformance with all regulations of Public Utilities and utility districts.
 3. Where such laws, ordinances, rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to

Contract Time or Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to execution date of the Agreement.

4. General Contractor shall not self-perform specialty contracting work defined in sections 7055 – 7059.1 of the California Business and Professions Code unless the General Contractor has the specialty contractor's license appropriate for the work performed. Otherwise, specialty contractors shall be retained by the contractor to perform specialty work identified in the project scope.

1.05 PROJECT INSPECTIONS

A. Provision of inspectors by Owner, if any, and Information pursuant to this Section and Section 1.04 above shall be subject to the following:

1. Contractor shall allow inspectors full access to Project at all times.
2. Contractor shall not take any direction, approvals or disapprovals from inspectors.
3. Contractor shall not rely on inspectors to ensure Work is completed in accordance with Contract Documents.
4. Acts of omissions of any inspector (including without limitation inspector's failure to observe or report deficiencies in Contractor's Work) shall not relieve Contractor for responsibility to complete Work in accordance with Contract Documents.

1.06 DEFERRED APPROVAL

A. Where noted in the Contract Documents, certain items of materials and/or systems may require deferred approval pending submittals of shop drawings. For these items, Contractor shall submit details and structural calculations for anchorage, to comply with State of California Code of Regulations Title 24, table T17-23-J. Calculations shall be made by a licensed Structural Engineer registered in the State of California.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 41 00

SECTION 01 42 00

REFERENCES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Definitions and terms used in Contract Documents
- B. Reference Standards used in Contract Documents
- C. Common abbreviations and acronyms which may be used in Contract Documents

1.02 RELATED SECTIONS

- A. Section 014100 – Regulatory Requirements

1.03 DEFINITIONS OF TERMS

- A. Basic Contract Definitions: Words and terms governing the Work are defined in the General Conditions of the Contract, provided in the Contract Documents.
- B. Additional words and terms are used in the Drawings and Specifications and are defined as follows:
 - 1. Applicable: As appropriate for the particular condition, circumstance or situation.
 - 2. Approve (d): Used in conjunction with action on submittals, applications, and requests, is limited to duties and responsibilities stated in the General Conditions. Approvals shall only be valid if obtained in writing and shall not apply to matters regarding the means, methods, techniques, sequences and procedures of construction. Approval shall not release Contractor from responsibility to fulfill Contract requirements.
 - 3. And/or: If used, shall mean that either or both items so joined are required.
 - 4. By others: Work on the project that is outside the scope of Work to be performed under the Contract, but that will be performed by Owner, separate contractors or other means.
 - 5. Contractor-Furnished/Owner-Installed (CFOI): Items, systems or equipment purchased by the Contractor as part of the project and handed over to the Owner for installation.
 - 6. Construction Site: Same as site.
 - 7. Directed: As instructed by Owner or Owner's Representative, in writing, regarding matters other than the means, methods, techniques, sequences and procedures of construction. Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by Owner's Representative", requested by Owner's Consultant" or Owner's Representative and similar phrases. No implied meaning shall be interpreted to extend the Owner's Representative responsibility into Contractor's supervision of construction.

8. Equal or Equivalent: As determined by the Owner's Consultant as being of the same quality, appearance, utility, durability, finish, function, suitability, and performance.
9. Furnish: Means "supply and deliver, ready for unloading, unpacking, assembly, installation, and similar operations".
10. Indicated: Refers to graphic representations, notes or schedules on Drawings, or Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used, it is to help locate the reference.
11. Install: Describes operations at the site including unloading, unpacking, assembly, erection, anchoring, applying, working to dimension, protecting, cleaning, and similar operations.
12. Installer: "Installer" is the ~~Contractor~~Contractor, or an entity engaged by the Contractor, as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - a. Experienced Installer: The term "experienced", when used with "installer" means having a minimum of five (5) previous Projects similar in size to this Project, and familiar with the precautions required, and with requirements of the authority having jurisdiction.
13. Jobsite: Same as site.
14. Necessary: as determined in the professional judgement of the Owner Representative through the Owner's Consultant as being necessary for the Work, in conformance with the requirements of the Contract Documents, and excluding

matters regarding the means, methods, techniques, sequences and procedures of construction.
15. Noted: Same as indicated.
16. Owner-Furnished/Contractor-Installed (OFCI): Item, system or equipment furnished by Owner at its cost and installed by the Contractor as part of the Work.
17. Per: In accordance with or in compliance with.
18. Products: Materials, systems or equipment.
19. Project site: Same as site.
20. Proper: As determined by the Owner's Representative as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, which are solely the Contractor's responsibility to determine.
21. Provide: Means "furnish and install, complete and ready for use".
22. Regulation: Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, and rules, conventions and agreements within the construction industry

that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.

23. Required:
 - a. As required by regulatory requirements of governing authorities.
 - b. As required by referenced standards.
 - c. As required by existing job conditions.
 - d. As generally provided by accepted construction practices of the locale.
 - e. As indicated on the Drawings and in the Specifications.
 - f. As otherwise required by the Contract Documents.
24. Scheduled: Same as indicated.
25. Selected: As selected by Owner's Representative or Owner's Consultant from the full national product selection of the manufacturer, unless otherwise specifically limited in the Contract Documents to a particular quality, color, texture or price range.
26. Shown: Same as indicated.
27. Site: Same as Site of the Work or Project Site; the area or areas or spaces occupied by the Project and including adjacent areas and other related areas occupied or used by the Contractor for construction activities, either exclusively or with others performing other construction on the Project. The extent of the

Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.
28. Testing Laboratories: Same as Testing and Inspection Agency.
29. Testing and Inspection Agency: An independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.
30. Owner-Furnished/Contractor-Installed (OFCI): Same as Owner-Furnished/Contractor-Installed.

1.04 REFERENCE STANDARDS

- A. References: The Drawings and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests, and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual Sections of the Specifications.
- B. Relationship to Drawings and Specifications: Such references are incorporated into and made a part of the Drawings and Specifications to the extent applicable.
- C. Referenced grades, Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified in the Drawings or Specifications, provide the highest, best and greatest of the alternatives or options for the intended use and prevailing conditions.
- D. Copies of Reference Standards:
 - 1. Reference standards are not furnished with the Drawings and Specifications. It is the responsibility of the Contractor, subcontractors, manufacturers, suppliers, trades and crafts to be familiar with these generally recognized standards of the construction industry.
- E. Jobsite Copies:
 - 1. Contractor shall obtain and maintain at the Project site copies of reference standards identified on the Drawings and in the Specifications in order to properly execute the Work.
- F. Edition Date of References:
 - 1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of the Contract.
 - 2. All amendments, changes, errata, and supplements as of the effective date shall be included.
- G. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is the responsibility of the Contractor to be familiar with and have access to these nationally, and industry recognized specifications and standards.

1.05 ABBREVIATIONS & ACRONYMS

- A. Abbreviations and Names: Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable.
- B. Refer also to the "Encyclopedia of Associations", published by Gale Research Co., available in most libraries.
- C. The following are commonly used abbreviations which may be found on Contract Drawings and in Contract Specifications:

AA	Aluminum Association
AAA	American Arbitration Association
AAC	Architectural Anodizers Council
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ACPA	American Concrete Pumping Association
ADA	Americans with Disabilities Act
ADC	Air Diffusion Council
AFSA	American Fire Sprinkler Association
AGA	American Galvanizers Association (formerly AHDGA)
AGA	American Gas Association
AGC	Associated General Contractors of American
AI	Asphalt Institute
AIA	American Institute of Architects
AIMA	Acoustical and Insulation Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association International
ANSI	American National Standards Institute
APA	Engineered Wood Association (formerly American Plywood Association)
APWA	American Public Works Association
ARMA	Asphalt Roofing Manufacturers Association
ASAC	American Subcontractors Association of America
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASPE	American Society of Plumbing Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BOC	Board of Corrections
CABO	Council of American Building Officials
CAC	California Administrative Code (see California Code of Regulations (CCR))
CAL/OSHA	State of California Construction Safety Orders
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Electrical Code
CFC	California Fire Code
CFR	Code of Federal Regulations
CIMA	Construction Industry Manufacturers Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers' Institute
CMC	California Mechanical Code
CPC	California Plumbing Code
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
CTIOA	Ceramic Tile Institute of America, Inc.
DHI	Door and Hardware Institute
DSA	Division of the State Architect
EJMA	Expansion Joint Manufacturers Association
FGMA	Flat Glass Marketing Association
FM	Factory Mutual Research Organization
FS	Federal Specification (from GSA)
GA	Gypsum Association
GSA	General Services Administration
HCAI	Department of Health Care Access and Information (State of California)
IAPMO	International Association of Plumbing and Mechanical Officials
IEEE	Institute of Electrical and Electronics Engineers, Inc.
ISO	International Organization for Standardization

MIA	Masonry Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MM	State of California, Business and Transportation Agency, Department of Transportation, "Materials Manual"
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NEC	National Electrical Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NFSA	National Fire Sprinkler Association
NGA	National Glass Association
NIBS	National Institute of Building Sciences
NIST	National Institute of Standards and Technology
NPCA	National Precast Concrete Association
NRCA	National Roofing Contractors Association
NSC	National Safety Council
NSF	National Sanitation Foundation
NSPE	National Society of Professional Engineers
NTMA	National Terrazzo and Mosaic Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing and Drainage Institute
PS	Product Standard (U.S. Department of Commerce)
RIS	Redwood Inspection Service
SDI	Steel Deck Institute
SFM	State Fire Marshal (California)
SFPE	Society of Fire Protection Engineers
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Society for Protective Coatings (Steel Structure Painting Council)
SSPWC	Standard Specifications for Public Works Construction
SWRI	Sealant, Waterproofing and Restoration Institute
TCA	Tile Council of America
TJC	The Joint Commission
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USS	United States Standard
WCLIB	West Coast Lumber Inspection Bureau
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

- D. Words and terms not otherwise specifically defined in this Section or in the Contract Documents, shall be as customarily defined by trade or industry practice, by reference standard and by specialty dictionaries such as Dictionary of Architecture and Construction (Cyril M. Harris, McGraw-Hill Educational; 4th Edition, September 5, 2005). E. Additional abbreviations, used on the Drawings, are listed thereon.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 42 00

SECTION 01 45 00

QUALITY CONTROL

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Contractor's Quality Control
- B. Quality of the Work
- C. Inspections and tests by governing authorities
- D. Inspections and tests by serving utilities
- E. Inspections and tests by manufacturer's representatives
- F. Inspections and Independent testing and Inspection Laboratories/Agencies
- G. Contractor's responsibilities in inspections and tests
- H. Contractor's responsibilities regarding the Owner's testing laboratory
- I. Test reports
- J. Geotechnical engineer

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 014100 – REGULATORY REQUIREMENTS: Compliance with applicable codes, ordinances and standards.
- C. Section 014550 – INSPECTION and TESTING of WORK
- D. Section 016100 – PRODUCT REQUIREMENTS: Product Options, substitutions, transportation and handling requirements, storage and protection requirements, and system completeness requirements.

1.03 CONTRACTOR'S QUALITY CONTROL

- A. Contractor's Quality Control: Contractor shall ensure that products, services, workmanship and site conditions comply with requirements of the Contract Documents by coordinating, supervising, testing and inspecting the Work and by utilizing only suitably qualified personnel.
- B. Quality Requirements: Work shall be accomplished in accordance with quality requirements of the Contract Documents, including, by reference, all Codes, laws, regulations and standards. When no quality basis is prescribed, the quality shall be in accordance with the best-accepted practices of the construction industry for the locale of the Project, for projects of this type.

- C. Quality Control Personnel: Contractor shall employ and assign knowledgeable and skilled personnel as required by contract or necessary if not prescribed to perform quality control functions to ensure the Work is provided as required.

1.04 QUALITY OF THE WORK

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.
- B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements and adjacent construction.
- C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling and staining, until Acceptance by Owner.
- D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report (ICC) requirements in preparing, fabricating, erecting, installing, applying, connecting and finishing Work.
- E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviation is acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by Owner's Representative and Owner's Consultant in accordance with provisions of the General Conditions of the Contract.
 - 1. Contractor shall cooperate by making Work available for inspection by Owner's Representative, Owner's Consultant or their designated representatives.
 - 2. Such verification may include mill, plant, shop, or field inspection as required.
 - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured, fabricated or stored.
 - 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by Owner's Representative or Owner's Consultant.
 - 5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the General Conditions of the Contract.
- G. Observations by Owner's Consultants: Periodic and occasional observations of the Work in progress will be made by Owner's Consultant and their consultants as deemed necessary to review progress of Work and general conformance with design intent.
- H. Limitations on Inspections, Tests and Observations: Neither employment of independent testing and inspection agencies nor observations by Owner's Consultant and their consultants shall relieve

Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents.

- I. Acceptance and Rejection of Work: Owner's Representative reserves the right to reject all Work not in conformance to the requirements of the Contract Documents.
 - 1. If initial tests or inspections made by Owner's Testing Laboratory or Geotechnical Engineer reveal any portion of the Work fails to comply with Contract Documents, or if it is determined that any portion of Work requires additional testing or inspection, additional tests and inspections shall be made as directed by Owner's Representative.
 - 2. If such additional tests or inspections establish such portions of the Work comply with Contract Documents, all costs of such additional testing or inspection will be paid by Owner.
 - 3. If such additional tests or inspections establish such portions of the Work fail to comply with Contract Documents, all costs of such additional tests and inspection shall be deducted from the Contract sum.
- J. Correction of Non-conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by Contractor at no change in the Contract Sum or Contract time.
- K. Acceptance of Non-Conforming Work: Acceptance of non-conforming Work, without specific written acknowledgement and approval of Owner shall not relieve Contractor of the obligation to correct such Work.
- L. Contract Adjustment for Non-conforming Work: Should Owner or Owner's Consultants determine it is not feasible or in Owner's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between Owner and Contractor. If equitable reduction in Contract Sum cannot be agreed upon, a Directed Change Order will be issued and the amount in dispute resolved in accordance with applicable provisions of the General Conditions of the Contract.

1.05 INSPECTIONS AND TESTS BY GOVERNING AUTHORITIES

- A. Regulatory Requirements for Testing and Inspection: Comply with California Building Code (CBC) requirements and all other requirements of governing authorities having jurisdiction.
- B. Inspections and tests by governing Authorities: Contractor shall cause all tests and inspections required by governing authorities having jurisdiction to be made for Work under this Contract.
 - 1. Such authorities include Owner's Building Inspection (code compliance), Fire Marshal's office and similar agencies.

1.06 INSPECTIONS AND TESTS BY SERVING UTILITIES

- A. Inspections and Tests by Serving Utilities: Contractor shall cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

1.07 INSPECTIONS AND TEST BY MANUFACTURER'S REPRESENTATIVES

- A. Inspections and Tests by Manufacturer's Representatives: Contractor shall cause all tests and inspections specified to be conducted by materials or systems manufacturers, to be made. Additionally, all tests and inspections required by materials or systems manufacturers as condition of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum. Manufacturer's Representatives shall provide a PDF electronic report indicating but not limited to work or materials that are missing, not installed correctly, damaged or need correction. Manufacturer's Representatives shall issue a final PDF electronic report once all work and materials are installed correctly, functioning and in compliance with the Manufacturer's Warranty.

1.08 INSPECTION BY INDEPENDENT TESTING AND INSPECTION LABORATORIES A.

Definitions:

1. The term "Owner's Testing Laboratory" means a testing laboratory retained and paid for by Owner for the purpose of reviewing material and product reports, performing material and product testing and inspection, and other services as determined by Owner.
- B. Owner will select an independent testing and inspection laboratory or agency to conduct tests and inspections as called for in the Contract Documents and as required by governing authorities having jurisdiction.
1. Responsibility for payment for tests and inspection shall be as indicated in the schedule below. All time and costs for Contractor's services related to such tests and inspections shall be included in Contract Time and Contract Sum.
- C. Contractor shall notify Owner, and if directed by Owner's Representative testing and inspection laboratory, when Work is ready for specified tests and inspections.
- D. Contractor shall pay for all additional charges by testing and inspection agencies and governing authorities having jurisdiction due to the following:
1. Contractor's failure to properly schedule or notify testing and inspection agency or authority having jurisdiction.
 2. Changes in sources, lots or suppliers of products after original tests or inspections.
 3. Changes in means, methods, techniques, sequences and procedures of construction that necessitate additional testing, inspection and related services.
- E. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design. Test and inspections shall include, but not be limited to, the following:

List the applicable services required, for example:

Material Inspections and Tests		Paid by:
Concrete Reinforcement	Reinforcement Inspection	Owner
	Reinforcement Strength	Owner
Cast in Place	Slump Tests	Owner
	Compressive Strength Tests	Owner
Structural Steel	Welding Inspection	Owner
	High Strength Bolting Inspection	Owner

- F. Test and Inspection Reports: After each inspection and test, one (1) PDF electronic report shall be promptly submitted to Owner's Representative, Contractor and to agency having jurisdiction (if required by code).

1. Reports shall clearly identify the following:
 - a. Date issued
 - b. Project name and Project number
 - c. Identification of product and Specification Section in which Work is specified
 - d. Name of inspector
 - e. Date and time of sampling or inspection was conducted
 - f. Location in Project where sampling or inspection was conducted
 - g. Type of inspection or test
 - h. Date of tests
 - i. Results of tests
 - j. Comments concerning conformance with Contract Documents and other requirements
2. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
3. Samples taken but not tested shall be reported.
4. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
5. When requested, testing and inspection agency shall provide interpretations of test results.
6. Verification reports shall be prepared and submitted, stating tests and inspections specified or otherwise required for Project, have been completed and material and workmanship comply with the Contract Documents. Verification reports shall be submitted at intervals not exceeding six (6) months, at Substantial Completion of the Project, and at all times when Work of Project is suspended.

1.09 CONTRACTOR RESPONSIBILITIES IN INSPECTIONS AND TESTS

- A. Tests, inspections and acceptances of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Except as otherwise provided, Contractor shall notify Owner's Representative to make arrangements for such tests, inspections and acceptances. Contractor shall give Owner's Representative timely notice of all required inspections as outlined in Specification Section 014550 – INSPECTION and TESTING of WORK, Item 1.05, Scheduling Inspections – Notification Requirements.

- B. If such procedures for testing, inspection or acceptance reveal failure of any portion of the Work to comply with requirements of the Contract Documents, Contractor shall bear all costs made necessary by such failure including those of repeated procedures, including compensation for Owner's Consultant's services and expenses.
- C. If Owner and/or Owner's Consultants are to observe tests, inspections or make acceptances required by the Contract Documents, Owner and/or Owner's Consultant will do so promptly and, where practicable, at the normal place of testing.
- D. Cooperate with testing and inspection agency personnel, Owner, Owner's Consultant's and their consultants. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.
- E. Provide incidental labor and facilities to provide safe access to Work to be tested and inspected, to obtain and handle samples at the Project site or at source of products to be tested, and to store and cure test samples.

1.10 CONTRACTOR RESPONSIBILITIES REGARDING OWNER TESTING LABORATORY

- A. Secure and deliver to Owner's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.
- B. Submit to Owner's Representative the preliminary design mixes proposed for concrete and other materials, which require review, by Owner's Consultants and/or Owner's Testing Laboratory.
- C. Submit copies of product test reports as specified.

1.11 TEST REPORTS

- A. Owner's Testing Laboratory shall submit one (1) PDF electronic copy of all reports to the Owner's Representative, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

1.12 Owner will distribute one (1) PDF electronic copy of the reports to Owner's Consultants and Contractor.
GEOTECHNICAL ENGINEER

- A. Owner will retain and pay the expense of a Geotechnical Engineer to perform inspection, testing and observation functions specified by Owner. Geotechnical Engineer will communicate only with Owner. Owner's Representative shall then give notice to Contractor, of any action required of Contractor.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 45 00

SECTION 01 45 50

INSPECTION AND TESTING OF WORK

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Project Inspections and Procedures
- B. Scheduling Inspectors – Notification requirements

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013500 – SPECIAL PROCEDURES
- D. Section 014100 – REGULATORY REQUIREMENTS
- E. Section 014500 – QUALITY CONTROL

1.03 DEFINITIONS

- A. IOR: Inspector-of-Record
- B. FM: Fire Marshal
- C. TL: Testing Laboratory

1.04 PROJECT INSPECTIONS AND TESTING PROCEDURES

- A. Inspections: The following inspections will be requested on this project, as appropriate. Also see Part 3 for additional inspection items or Part 3
 - 1. Inspections required by the California Building Code
 - 2. Inspections listed on the Testing, Inspection and Observation (TIO) form
 - 3. Final inspections
- B. Procedures: Owner's Representative shall be the Contractor's contact for all inspection requests. Contractor shall fill out Inspection Request Form for all inspections.
 - 1. Contractor shall properly plan and coordinate inspection requests. Schedule delays caused by Contractor's failure to plan and/or coordinate inspection requests will not be considered for adjustments to Contract Time or Contract Sum.
 - 2. A complete set of stamped and approved Contract Drawings and Contract Specifications, including applicable shop drawings and building permit shall be available on site for review

by the Inspector-of-Record. The Contractor, Subcontractors and other responsible parties shall be present during inspection walkthroughs. All areas of project scope shall be ready and accessible for inspection. Contractor shall provide access equipment as applicable for the inspector's needs.

3. A complete set of codes referred to in the approved plans must be maintained on the job at all times.
4. Contractor shall submit verified compliance reports as outlined in the California Administrative Code, Section 7-151.

1.05 SCHEDULING INSPECTIONS –NOTIFICATION REQUIREMENTS

- A. Advance Inspection Notification: Owner's Representative for this project requires the following advance notifications to schedule appropriate inspection agencies at the project site.
 1. IOR Inspection Request Notification: Twenty-four (24) hours. Note: Inspection requests received by 2:00 PM will be scheduled for next day inspection. Inspection requests received after 2:00 PM will be scheduled for the following day; (example: Inspection request received at 2:01 PM on a Monday would be scheduled for inspection on Wednesday). Weekend and off-hours inspection requests will be scheduled on a case-by-case basis with a minimum of seventy-two (72) hour inspection request notification.
 2. Testing Laboratory Inspections: Forty-eight (48) hours.
 - a. All testing laboratory and testing procedures must be scheduled by Owner's Representative. Inspections and/or testing directly scheduled by Contractor will not be accepted.
 - b. Contractor will bear all costs associated with unauthorized inspections and testing.
 3. Fire Marshal Inspection Request Notification: Seventy-two (72) hours.
- B. Methods of Inspection Notification:
 1. All inspection notifications shall be in writing using inspection forms located at back of this Section. Incomplete forms will be returned as non-compliant, and no inspection will be scheduled until all required inspection information is provided.
 2. Emailed inspection requests will be accepted. Owner's Representative email address is Joseph.Cooper@lakecountycal.gov Notification time begins from the date and stamp of the email, provided it is sent during normal business hours. Emailed inspection requests sent after normal business hours and/or received on non-normal workdays, as defined in Specification Section 013100 – COORDINATION, paragraph 1.07.F.4.A will begin notification time starting at 7:00 AM the following normal business day.
- C. Off-hours Inspection Requests: Contractor shall provide time windows for all off-hour or other than normal work hour inspections. Owner's Representative shall have final authority in setting times of off-hour inspections.
- D. Re-inspections:

1. More than two (2) re-inspections: The cost of re-inspections of the same work, more than twice, shall be deducted from Contract Sum. Owner will provide itemized invoice for Contractor's records.
2. Work unprepared for inspection: Re-inspections of the same work scheduled by Contractor, but not ready for inspection will be identified as a re-inspection.

PART II - PRODUCTS – Not Applicable to this Section.

PART III - EXECUTION

Note: Part 3 describes typical inspection requirements for each individual inspector's jurisdiction for non-HCAI projects. Part 3 is provided as a reference source for Contractor's use and Scheduling, as applicable. Part 3 is not intended to be all-inclusive and Contractor shall verify actual inspection requirements needed for this project. FIRE DAMPERS (Title 24, Part 2, Chapter 43) Note: Manufacturer's installation instructions shall be used for inspections and testing. A. 1 Hour: IOR test 100%. Fire Marshal tests 100% or as needed.

B. 2 Hour: IOR tests 100%. Fire Marshal tests 100%.

C. Smoke: IOR tests 100%. Fire Marshal tests 100%.

3.02 FIRE SPRINKLERS (Title 24, Part 2, Volume 1, Chapter 9; NFPA Bulletin 13) A.

Approved drawings shall be on jobsite from start to completion of project.

B. Underground pressure test @ 200 psi.

C. Fire Marshal to witness installation of underground lines.

D. Fire Marshal to witness underground flush prior to connection.

E. Hydro-test above ground piping @ 200 psi for two (2) hours.

F. Inspection of hangers, bracing, and seismic joint crossing(s).

G. Flow alarm test, tamper switch test.

H. Fire pump test.

I. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).

J. Final inspection: signs in place, labeling, fire extinguishing system flow alarm test.

3.03 FIRE ALARM SYSTEM (Title 24; Part 9, Article 1006)

Note: Fire Sprinkler and Fire Alarm systems tests shall be performed in presence of Fire Marshal. A.

Approved drawings shall be on jobsite from start to completion of project.

B. Verify Emergency Power source.

- C. Activate all initiating devices.
 - D. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).
 - E. Complete test of system per Title 24, Part 9, CFC, Article 1003.3.4.1).
- 3.04 MEANS OF EGRESS (Title 24, Part 2, Volume 1, Chapters 10)
- A. Exit sign/light locations and connected to two (2) sources of power.
 - B. Normal Power.
 - C. Emergency Electrical System, Life Safety Branch.
 - D. Construction - floors, walls, ceilings, penetrations per listings.
 - E. Electrical boxes - no back to back, 24 inches horizontal separation (Section 709).
 - F. Electrical boxes - 100+ square inches to be wrapped/protected.
 - G. Flame Spread, Fuel Contribution and Smoke Density for finishes (Chapter 8).
- 3.05 EMERGENCY LIGHTING
- A. Generator Test (Title 24, Part 3, Section 700-4; Section 701-5).
 - B. Emergency lights - locations (Title 24, Part 2, Volume 1, Chapter 10, Section 1003.2.8.5).
- 3.06 MECHANICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 4) A.
- Mechanical Equipment Requirements
- 1. Access to Equipment (Section 305, 405, 606.5, 815, 2.2.8, 903, 910.8, 1106.3).
 - 2. Labeling of Equipment (Section 307).
 - 3. Identification of Equipment - Area or Space Served (Section 304.5).
- B. Mechanical Testing
- 1. Air balance completed and reviewed by Mechanical Engineer-of-Record.
 - 2. Hydronic balance completed and reviewed by Mechanical Engineer-of-Record.
 - 3. Air and Hydronic reports forwarded to Mechanical Engineer of Record.
 - 4. Fuel Gas line inspection (Part 4, Section 1406 and Appendix B, Chapter 16).
- C. Boilers
- 1. Boiler – Operating Adjustments and Instructions (Section 1022).
 - 2. Boiler – Inspections and Tests (Section 1023).

3. Boiler – Clearances/Permits (Section 1005.0).

D. Ducts

1. Installation - Bracing (Part 4, Section 604.1.4)
2. Fire Damper test log from IOR (Part 4, Section 606.2).
3. Fire Damper test by Fire Marshal (Part 4, Chapter 6, Section 606.2).
4. Smoke Damper and Detector test log from IOR (Including Duct Detector tests).
5. Smoke Damper and Detector by Fire Marshal.

E. HVAC Unit Testing

1. Verify correct filter types and efficiencies.
2. Motor Rotation.
3. Condensate drain tests (Section 310).
4. Equipment shut down by smoke detectors (duct or space).

3.07 PLUMBING CHECKLIST FOR CLOSE-OUT (Title 24; Part 2, Chapter 29; Part 5)

A. Piping Systems (Title 24, Part 5)

1. Domestic Water Line Sterilization Test (Title 24, Part 2, Section 609.9; Title 22, Division 4, Chapter 16, Article 5).
2. Domestic Water System (hot, cold) Pressure test (Title 24, Part 5, 609.4).
3. Natural Gas Pressure Test (Title 24, part 5, Chapter 12, Section 1204).
4. Vent & Waste System Pressure test (Title 24, Part 5, 712.0).
5. Hydronic Water Pressure test (Title 24, Part 4 1201.2.8).

B. Water Heater Testing

1. Water Heater Temperature Test (Domestic).

3.08 ELECTRICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 3, and Part 1, Chapter 7, Section 7- 141, 7-149)

A. Main Panel/Service

1. Identification and Labeling of Equipment (110-21, 110-22, 230-70).
2. Grounding test and Certification (250, 250-56).
3. Ground fault interrupt test adjustment and certification [230-95(c); 517-17(c)].
4. Emergency power transfer switch test (700-4).

5. Panel load balance.

B. Emergency Power and Standby Systems (Article 700 & 701) [Test Logs from IOR]

1. Emergency Generator testing and certification (701-5).
2. Identification and Labeling of equipment (110-21, 110-22, 517-22).
3. Lighting and Lighting Levels (517-22).
4. Receptacles (410L, 517-13, 517-18, 517-19).
5. Exiting signs and lights [517-32(b), 517-42(b)].
6. Fire Alarm (760).

C. General Electrical Requirements

1. Working space/Headroom [Table 110-26(a); 110-33; 110-34].
2. Circuits and lights tested (410-45).
3. Receptacle polarity and grounding [200-10(b)].
4. Isolated ground monitor test [517-160(b)].
5. Motor load current adjustment.
6. Identification and Labeling of equipment (110-21; 110-22).
7. Identify circuits (517-19).

D. Miscellaneous Electrical Requirements

1. Test logs from Contractor and Inspector-of-Record.
2. Electrical Engineer-of-Record acceptance of system.
3. Owner In-Service training on Equipment.
4. Equipment Manuals and Instruction to Owner.
5. Warranties and Equipment Certification.
6. As-Built documents to Owner.

3.09 FIRE MARSHAL INSPECTION REQUIREMENTS A.

Framing Inspections

1. Structural members in fire-resistive construction.
2. Check fireproofing per approved design tested assembly description.

B. Fire-Rated Partition Locations

1. Check for stud and nailing/screwing spacing per approved design tested assembly description.
2. Check for fire blocking in combustible construction.
3. Check for rated door/window frame installation (manufacturer's installation instructions shall be available for review).
4. Check for electrical installation, for example, number and size of electrical boxes, panels, cabinets, etc.
5. Check hangers, seismic bracing for sprinkler piping installation, if applicable (this would be checked during overload pressure test inspection phase of sprinkler system).

Close-In

Inspections

1. Check fire-blocking and draft stops in combustible construction.
2. Check gypsum board installation in accordance with approved design assembly description for rated assembly.
3. Check integrity of firewall construction where recessed cabinets, panels, excessive electrical/plumbing are installed.

4. Check fire damper installation (manufacturer's installation instructions shall be available for review). Fire Marshal will witness actuation of minimum 10% fire dampers installed and 100% in 2 hour or greater fire rated wall assemblies.
5. Check for through-penetrations and fire-stop systems in all walls or floor/ceiling assemblies.
 - a. Check top of wall to structure fire stopping.
6. Check above ceiling areas and construction prior to installation of ceilings.
 - b. Check access and serviceability for above ceiling to included but not limited to valves, mechanical equipment, electrical equipment and other components that require adjustment, access or service.
 - c. Contractor shall move any items including but not limited to conduit, piping, braces and other obstructions that block access to equipment and components needing adjustment, access or service.
 - d. Check bracing, anchorage, fasteners and installation.

D. Final Construction Inspections

1. Final project walk-through: Example, Emergency lighting will be tested to verify exit illumination of both interior and exterior, while generator (if applicable) is tested at same time.

3.10 Refer to the following attachment.

- A. Inspection Request
- B. Non-conforming Work Notice

END OF SECTION 01 45 50

INSPECTION REQUEST

Project

[Contractor] [Design-

#: Inspection #: IR #: _____
ProjectBuilder] IR Date:
#: _____Spec Section
(s):

Name: _____

To: LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

Project Manager

Joseph Cooper

Email: Joseph.Cooper@lakecountycal.gov

P:

E-mail:

Drawing Ref.: _____

Detail: _____

Shop Drawing:

Project Schedule Activity ID No.: _____ Date of Inspection: _____

Time Requested:

Type of Inspection: _____

Location of Inspection (i.e., Floor, Column Line,
etc.): _____

*Re-inspection Requested for Previous IR #: _____

All work Requested for Inspection has been reviewed for compliance with the contract documents by [Contractor][Design- Builder]'s
Superintendent prior to notification of Inspection Request.

Signed: _____ Date: _____

OWNER USE ONLY

Date Received: _____ Time of Inspection: _____

Date of Inspection: _____ Inspector: _____ ☐ Inspection Report Attached

Inspector Arrival Time: _____ Inspector Departure Time: _____

Comments:

☐Approved
☐Approved as Noted
☐Not Approved
☐Cancelled

Inspection Request Notes or Description of Items of Deficiency if needed below (Part 1, Chapter 7, Section 7-145, item 6)

Project Field Record of Construction Progress Summary of Work in Progress (Part 1, Chapter 7, Section 7-145, item 6)	
Project Phase (Building Foundation, Structural, Wall Framing, Electrical Rough-In, Sprinkler Rough-In, etc.)	
Project Phase Percentage Complete (% of the phase completed):	Overall Project Percentage Complete:

NON-CONFORMING WORK NOTICE

PROJECT NAME:

JOB #:

Notice #:

Date:

To: [PROJECT MANAGER NAME/EMAIL] _____	From: IOR _____
[DESIGN PROFESSIONAL NAME/EMAIL] _____	
[PROJECT #, AREA COMPLIANCE OFFICER/EMAIL] _____	

Spec Section Ref.:

Paragraph: _____

Drawing Ref.: _____

Detail: _____

In accordance with Article 12 of the General Conditions, the following defective condition(s) has/have become apparent:

Reported by:

CORRECTIVE ACTION SHOULD BE TAKEN AS SOON AS POSSIBLE AND COMMENCE NO LATER THAN TEN (10) CALENDAR DAYS AFTER THIS NOTICE. COORDINATE THE VERIFICATION OF THE CORRECTIVE ACTIONS WITH THE INSPECTOR OF RECORD. IF FURTHER INFORMATION IS

NEEDED, ADVICE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH THE GENERAL CONDITIONS.

Description of corrective action taken: ____

Accepted by: _____ Date: _____

CC:

SECTION 01 51 00

TEMPORARY UTILITIES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Temporary Power and Lighting.
- B. Temporary Heating, Cooling & Ventilation.
- C. Temporary Water.
- D. Temporary Fire Protection.
- E. Temporary Telephone, Data, and WIFI.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and controls, to accommodate the Owner's occupancy and use of the areas and spaces adjacent to construction.
- C. Section 017400 – CLEANING
- D. Section 017700 – CLOSEOUT PROCEDURES

1.03 TEMPORARY UTILITIES

- A. Temporary Connections: Temporary power, water, sewer, gas and other utility services necessary for the Work may be made to existing building systems. Connections shall be subject to Owner's review and written approval. Coordinate with utility companies and Owner's Plant Operations & Maintenance Department for locations and methods of connections.
- B. Contractor shall provide and pay for installation, operation, maintenance, and removal of all utilities. The services will be provided at the current rates for each utility.

1.04 TEMPORARY POWER AND LIGHTING A.

Service Requirements:

- 1. Temporary Electrical Service: Contractor shall provide and pay for installation, operation, maintenance, and removal of temporary electrical service, lighting devices and restoration of existing and permanent equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California. Use of Owner's electrical power and lighting system is prohibited without Owner's written approval and will be considered only when an alternate electrical power source is unavailable.

- a. Install initial services at time of site mobilization.

- b. Modify and extend systems as Work requires.
 - c. Maintain electrical system to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
 - d. Restore existing and permanent lighting used during construction to original condition. Replace defective fixtures, bulbs, and other component parts.
 - e. Clean existing and permanent lighting fixtures used during construction per Section 017400 – CLEANING.
 - 2. Distribution: Contractor shall provide distribution network for temporary electrical power.
 - 3. Power Source: Arrange for service with Owner's Plant Operations and Maintenance Department, or local utility company.
 - 4. Conformance: All temporary wiring and electrical facilities shall be in accordance with applicable provisions of Electrical Safety Orders of the State of California.
 - 5. Temporary Lighting: Construction lighting shall be supplied and maintained by Contractor at Contractor's expense. Sufficient lighting levels shall be provided to allow construction to be properly and safely performed. Contractor shall give special attention to adequate lighting for stairs, ladders, floor openings, basements and similar spaces. Promptly replace burnt out, worn or defective parts.
 - 6. Lighting fixtures: Locate fixtures in areas of Work: One (1) lamped fixture in rooms, except closets and utility chases; one (1) lamped fixture for every 750 square feet in large areas.
 - 7. Security Lighting: Contractor shall provide security lighting during hours of low visibility.
- B. Distribution requirements:
- 1. Weatherproof distribution boxes with one (1) - 240-volt, three (3) phase power outlet and four (4) – 120-volt outlets consisting of 100 amperes fused switches with equipment ground, spaced so a 100-foot extension cord will reach all areas of building.
 - 2. Wiring, connections and protection for temporary lighting.
 - 3. Wiring connections and protection for temporary and permanent equipment, for environmental control, for temporary use of electricity operated equipment, and for testing.
- C. Use of Owner System: If alternate electrical power and lighting sources are unavailable, Owner may permit Contractor to use existing, in-place electrical system. Owner does not guarantee availability of electrical power or adequate lighting levels through use of existing system. If power and lighting is insufficient or not available Contractor shall provide secondary source (i.e., generator) as approved by Owner.

1. It is expressly understood and agreed by Contractor that Owner existing power and lighting system's primary obligation is servicing patient care. The Owner system is not designed for purposes of construction activities.
2. Contractor should expect power and lighting interruptions during course of Work. Contractor will be required to cease use of Owner electrical-power and lighting systems, as required by the needs of Owner.
3. When use of Owner electrical system is approved in writing, Contractor is required to adhere to Owner's electrical lockout procedures. See Division 26– Electrical or Campus Design Guidelines.
 - a. Provide and maintain warning labels on energized equipment.
 - b. Replace plates, electrical devices or similar existing items or components damaged as a result of temporary usage.

1.05 TEMPORARY HEATING, COOLING AND VENTILATING A.

Service Requirements:

1. Contractor shall provide temporary heat as necessary for proper installation of all work and to protect all work and materials against injury from dampness and cold and to dry out building. Fuel, equipment and method shall be approved in writing by Owner's Representative.
2. Install initial services at time of site mobilization. Modify and extend systems as Work requires.
3. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
4. Use of permanent heating system is preferred to any other system for maintaining temperature of building during installation of finish materials, but such use will not be permitted before clean-up after plastering and/or drywall work has been completed. Contractor shall make every effort to complete permanent heating system in time for such use. Permanent fans shall not be used before filters are installed. Filters shall be cleaned and serviced by Contractor just prior to final acceptance.
 - a. Vent portable units to building exterior, complete with automatic controls. Direct-fired units are not allowed. Locate units and outlets to provide uniform distribution of heating, cooling and ventilating.
 - b. Operate and maintain existing equipment being used; clean or replace filters and install filters in duct extensions as necessary to maintain occupied areas, work areas and finished areas, in specified condition.
 - c. Prior to operation of permanent equipment, verify controls and safety devices are complete, equipment has been tested, and inspection made and approved for operation.

- d. Remove temporary materials and equipment when permanent system is operational. Restore existing and permanent systems used for temporary purposes to original condition.
- e. Install temporary filters in air handling units and ducts, replace as necessary to prevent dust in equipment and ducts, to avoid contaminants in Work or finished areas. After completion, replace temporary filters with new, clean, reusable filters.
- 5. Maintain temperature, humidity, and ventilation in enclosed areas to provide ambient conditions for storage, preparation and Work; to cure installed materials, to prevent condensation, to dry floor surfaces and to prevent accumulations of dust, fumes and gases.
- 6. During non-working hours maintain temperature in enclosed areas occupied solely by Contractor at a minimum of 50°F., or higher as specified in individual Sections and by individual product suppliers and manufacturers. Areas occupied in whole or in part by Owner are to be maintained at normal temperatures.

B. Utility Sources:

- 1. Electrical: As specified above in Item 1.04.
- 2. Existing mechanical systems may be used for temporary purposes. Coordinate use with Owner for conditions to be maintained in adjacent Owner occupied areas.
- 3. Contractor shall provide and pay for all installation, operation, maintenance, and removal of equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California.

1.06 TEMPORARY WATER

A. Service Requirements:

- 1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner's systems when temporary service is connected.
- 2. Water service, if necessary for construction, can be made available at no expense to the Contractor provided the water is not wasted. Contractor shall be responsible for distribution of water to points of use.
- 3. Certified reduced pressure type back-flow prevention device as submitted to and approved by Owner shall be installed before water is obtained from an Owner facility fire hydrant or interior building connection.

B. Plumbing: Maintain system to provide continuous service with adequate pressure to outlets, including Owner system when temporary service is connected. See also Division 1 Approvals.

- 1. Size piping to supply construction needs, temporary fire protection, and for Owner's needs when existing service is connected.
- 2. Disinfect piping used for drinking water. See Division 33 and 22 for requirements or Campus Design Guidelines

3. Source: Owner existing service, connect at locations as directed by Owner.
 4. Provide valved outlets to control water pressure adequately for hoses.
 5. Fire hydrants used for water supply for construction – Contractor must use only ⅝” square hydrant wrench on square operating nut and must use only pentagon wrench on pentagon operating nut. This is to prevent damage to the hydrant operating nut. Any damage caused by the use of an improper wrench or other misuse of the hydrant must be repaired at contractor expense. Contractor must inspect hydrant prior to use and make the Owner aware of any pre-existing damage.
- C. Use of Existing System: Existing system may be used for temporary water. Monitor usage to prevent interference with Owner's normal operational requirements.
 - D. Use of Permanent System: Contractor shall obtain written agreement from Owner establishing start of warranty period and conditions of use.
 - E. Contractor shall pay for installation, operation maintenance and removal of system and restoration of existing and permanent equipment. Owner will pay costs of water consumed for normal construction operations. Contractor shall take measures to conserve usage.

1.07 TEMPORARY FIRE PROTECTION A.

Requirements:

1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
2. Provide and maintain fire protection equipment including extinguishers, fire hoses and other equipment as necessary for proper fire protection during course of the Work.
3. Use fire protection equipment only for fighting fires.
4. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings and throughout construction site. In area under construction, provide at least one (1) fire extinguisher for each 5,000 square feet of building floor area. Locate fire extinguishers so that a person never has to walk more that seventy-five (75) feet to obtain one.
5. Assign qualified person with authority to maintain fire protection equipment, institute fire prevention measures, and direct prompt removal of combustible and waste material. Submit ILSM requirements per Specification SECTION 013500 – SPECIAL PROCEDURES.

1.08 TEMPORARY TELEPHONE, DATA, INTERNET, and WIFI A. Service

Requirements:

1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
2. Contractor shall select from the following options:

- a. Owner shall provide conduit, cabling and dial tone to Contractor's location(s). Contractor shall pay Owner for cable, conduit installation and later removal of same and also pay Owner a monthly fee for use of Owner telephone, data internet, and WIFI system.
 - b. Owner shall provide conduit and cabling to Contractor's location(s). Contractor shall receive dial tone from local utility. Contractor shall pay Owner for cabling, conduit installation, maintenance of same and later removal of same. Contractor shall pay local utility for monthly telephone, data, internet and WIFI service.
 3. Contractor shall select number of lines, instruments and other features.
 4. Contractor shall prepare and submit to Owner an itemized request for telephone lines (according to option 2a or 2b above) and internet service. Project Manager will submit a service request to the IT department.
- B. Use of Existing System: Existing Owner telephone system shall not be used for temporary telephone service.
- C. Contractor Phone:
1. Contractor shall have telephone emergency number or other facility available at Contractor's business office for duration of contract where contractor and superintendent may be contacted within twenty-four (24) hours. Provide emergency numbers to Owner.
- D. Telephones:
1. Contractor shall use, and only permit to be used, FCC approved communication devices on frequencies approved by FCC and Owner.
 2. Contractor shall not use, or permit to be used, communication devices which interfere with existing Owner communication systems, including, but not limited to:
 - a. Life Flight or CHP helicopters.
 - b. Emergency Service vehicle communications.
 - c. Microwave transmission stations.
 - d. Cellular or other mobile phone systems.
- E. Temporary Internet Service: Provide a high-speed internet connection (Min. 20 Mbps download, 10 Mbps upload) to Contractor's field offices. The Contractor's field office shall be capable of sending and receiving e-mail and be able access the Internet.
1. WIFI coverage at the above internet speeds will be provided throughout the jobsite.

PART II - PRODUCTS

2.01 MATERIALS

- A. May be new or used, adequate to the purpose.
- B. Devices and Equipment: Standard devices, meeting UL requirements.
- C. Telephones: may be product of local service company or specialty devices compatible with service company requirements.
- D. Modems compatible with internet service.

PART III - EXECUTION

3.01 INTERRUPTION OF EXISTING SERVICES

- A. No existing utility services shall be interrupted at any time without prior written approval from the Owner. Required shutdowns shall be scheduled a minimum of fourteen calendar days prior to actual shutdown. The operation of valves, switches, etc. will be performed and paid for by Owner.
 - 1. Prior to the outage, all possible Work shall have been completed which will minimize the length of the required outage. During the outage, the Work will be prosecuted with diligence by an adequate number of skilled personnel.
 - 2. Provide and pay for all personnel required by the Owner to maintain safe conditions during the outage including but not limited to fire watch, safety monitors and/or traffic control. Coordinate Work with Owner's Representative.

3.02 REMOVAL OF TEMPORARY CONSTRUCTION

- A. At the completion of the Work, the Contractor shall remove from the Project site all temporary utilities and services construction. Leave the Project site clean and free from debris, materials, or equipment.

END OF SECTION 01 51 00

SECTION 01 52 00

CONSTRUCTION FACILITIES

PART I - GENERAL

1.01 SECTION INCLUDES A.

Field Offices and Sheds

B. Temporary Facilities

C. Temporary Sanitary Facilities

1.02 RELATED SECTIONS

A. Section 011100 – SUMMARY OF THE WORK

B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner continued use of the areas and spaces adjacent to construction.

C. Section 017400 – CLEANING

D. Section 017700 – CLOSEOUT PROCEDURES

1.03 FIELD OFFICES AND SHEDS

A. Field Office: Contractor shall provide a job office that will conform to the following minimum requirements:

1. Suitable space for Workstations, drawings, specifications, samples and other project records.
2. Conference space for eight (8) persons, including layout tables.
3. Heating and cooling to maintain a reasonable working environment.
4. Telephone, Data and WIFI service as specified in Section 015100 – TEMPORARY UTILITIES
5. Furnishings required: Conference table and chairs; racks and files for Contract Documents, submittals, and project record documents. Other furnishings are at Contractor's option.

B. Installation: Install office spaces for occupancy fifteen (15) calendar days after date of Owner/Contractor agreement.

C. Preparation: Fill and grade sites for temporary structures to provide drainage away from buildings.

- D. Contract Documents: Complete set of Contract Drawings and Contract Specifications shall be kept continuously at the site. Copies of all Change Orders, letters, Shop Drawings, etc., shall be kept on the jobsite at all times and shall be available for inspector's use.
- E. Contact numbers: Contractor shall provide telephone numbers where Contractor may be reached at all times during normal working hours and after normal working hours, if emergency problems develop that require Contractor's assistance.
- F. Storage Sheds and Containers for Materials, Tools and Equipment: If requested, Owner will provide space outside construction site where Contractor may provide and locate weather-tight sheds or containers for storage of construction materials, tools and equipment. Contractor shall be solely responsible for security of such sheds and containers. Size storage requirements to allow access, orderly provision of maintenance and inspection of products.
- G. Cleaning: Weekly janitorial services for offices; periodic cleaning and maintenance for office and storage areas. Contractor shall keep construction loading and parking areas clear of construction debris, especially debris that may cause slipping or tripping hazard that may injure vehicle tires, that may stain surfaces, and that may be tracked into existing buildings. Maintain approach walks free of mud and water.
- H. Removal: Upon completion of the work, and before the final payment, Contractor shall remove all temporary work and facilities and return site to condition required by the General Conditions of the Contract and at no change to the Contract Sum or the Contract Time.

1.04 TEMPORARY FACILITIES

- A. Contractor shall provide and maintain the following temporary facilities as required for execution of the Work:
 - 1. Scaffolding, staging, runways and similar equipment.
 - 2. Hoists or construction elevators, complete with operators, power and signals required.
 - 3. Temporary rigging, rubbish chutes, barricades around openings, ladders between floors, and similar equipment.
 - 4. Barricades, fencing, lights and similar safety precautions.
 - 5. Security cameras for remote video surveillance of the project site and 24/7 monitoring services that records and reports incidents and alarms. Security cameras to provide full coverage of the construction and storage site area.
- B. Maintenance: Use all means necessary to maintain temporary construction facilities and controls in proper and safe condition throughout progress of the Work.
- C. Replacement: In event of loss or damage, promptly restore temporary construction facilities and controls by repair or replacement at no change to the Contract Sum or the Contract Time.
- D. Conformance: All materials and equipment required to safely accomplish work under this Section shall be in conformance with requirements of CAL OSHA and other State and Federal Codes and regulations where applicable.

- E. Codes: All temporary work and facilities shall conform to the above requirements that pertain to operation, safety and fire hazard.
- F. Construction Site Security: Temporary barriers, doors and gates shall be keyed to Owner's master lock system. Security hardware to be provided by Contractor. Keying to Owner master lock system will be provided by Owner.

1.05 TEMPORARY SANITARY FACILITIES

- A. Use of existing facilities: Designated toilet facilities may be used by Contractor.
 - 1. Assigned facilities: Location of assigned toilet facilities and maintenance of same are responsibility of Owner. Contractor shall not have exclusive use to these facilities and shall abide by health and safety criteria regarding their use and sanitary upkeep.
 - 2. Unassigned facilities: Unassigned toilet facilities shall not be used without written authorization of Owner's Representative.
 - 3. Contractor may use existing toilet facilities that are within the limits of the Work. B.

Contractor shall pay service charges for connection and use of sewage utilities.

- C. Portable units: Enclosed, portable, self-contained units or temporary water closets and urinals, secluded from public view may be used. Self-contained units shall be approved by Owner's Representative prior to use.
 - 1. Contractor shall pay costs of installation, maintenance and removal of temporary sanitary facilities.
 - 2. Provide facilities at time of site mobilization.
 - 3. Modify and extend services as work progress requires.
 - 4. When utility services are available, provide water, sewer service, and temporary water closets; remove portable facilities. Remove temporary fixtures when permanent facilities are operational.
 - 5. Clean areas of facilities daily, maintain in sanitary condition. Disinfect fixtures, repair or replace damaged fixtures, accessories and surfaces.
 - 6. Provide toilet paper, paper towels, and soap in suitable dispensers.
 - 7. Restore existing and permanent areas and facilities used to original condition. Remove all temporary construction facilities above and below grade. Leave the project site clean and free of debris, materials and equipment.

PART II - PRODUCTS

2.01 MATERIALS

- A. Serviceable, new or used, adequate for required purpose. PART III -

EXECUTION – Not Applicable to this Section

END OF SECTION 01 52 00

SECTION 01 55 00

VEHICULAR ACCESS AND PARKING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Parking and Access Roads
- B. Traffic Regulation
- C. Project Informational Signs

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner's continued occupancy and use of the areas and spaces adjacent to construction.
- D. Section 017400 – CLEANING
- E. Section 017700 – CLOSEOUT PROCEDURES: Project Closeout.

1.03 PARKING AREAS AND ACCESS ROADS

A. Access Roads: Existing roads shall be used for construction access within limits defined herein. Temporary construction access roads shall not be permitted. B. Parking: Parking is controlled and limited by Owner.

- 1. Parking of personal vehicles belonging to Contractor employees may be arranged at the project site with Owner's Project Manager Approval. Parking will be allowed in employee permit areas, at the current permit rates depending on space availability.
- 2. Delivery of materials may be made to the job-site as required. Contractor shall coordinate with Owner's Representative.
- 3. Dumpsters shall be located in approved location as arranged by Owner's Representative.
- C. Existing Pavements and Parking Areas: Designated existing on-site streets and driveways may be used for construction traffic. Vehicles with metal tracks will not be allowed.
 - 1. Designated areas of existing parking facilities may be used by construction personnel. Do not allow heavy vehicles or construction equipment in parking areas.

2. Maintain traffic and parking areas in a sound condition, free of excavating material, construction equipment, products, mud, snow and ice.
3. Maintain existing and permanent paved areas used for construction. Repair existing facilities damaged by usage to original condition: promptly repair breaks, potholes, low areas, standing water and other deficiencies, to maintain paving and drainage in original or specified condition.
4. Remove temporary materials and construction when permanent paving is usable.

1.04 TRAFFIC REGULATION

- A. Schedule of Access Closing: Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. Contractor shall provide schedule of planned closing of any street for approval by Owner and shall give minimum of fourteen (14) calendar days' notice before closing any street or access.
- B. Use of Fire Lanes: Contractor shall notify Owner of all major pickups and deliveries that require use of controlled access fire lanes. Keys to gates or other barriers will be provided, as needed, to allow use of fire lanes. Vehicles parked in fire lanes for delivery of materials shall be continuously manned for immediate removal if required by the Owner.
 1. Fire Lanes to remain open at all times and shall not be blocked without a Traffic Control Plan provided prior to work at the Fire Lane and approved by the Owner's Representative.
- C. All major pick-up and delivery operations shall occur in total before or after normal working hours.
 1. Drawings may indicate haul routes designated by Owner for use of construction traffic. Confine construction traffic to haul routes.
 2. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.
- D. Post-mounted and wall-mounted traffic control and informational signs as specified herein.
 1. Traffic Control Signs, Traffic Message Boards, Cones, Drums, Flares, Lights and Flag Control equipment: All as approved by California MUTCD requirements.
 2. Contractor shall furnish at all barricades: Lights and flag control required to control traffic, and shall also provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for protection of the public; and maintain from the beginning of twilight throughout the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and/or the Work.
- E. Construction Vehicle Parking: Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations. Prevent parking on or adjacent to roads or in non-designated areas.
- F. Flag Control: Provide properly trained and equipped flagmen to regulate vehicular traffic when construction operations or traffic encroach on public traffic ways.

1. Provide properly trained and equipped personnel to regulate pedestrian traffic at all interior locations where construction traffic interfaces with Owner traffic.
 2. Flag control personnel shall wear appropriate identifying clothing such as bright colored vests, clearly visible and identifiable as having responsibility for traffic control.
- G. Lights: Use lights during hours of low visibility to delineate traffic lanes and to guide traffic.
- H. Traffic Signs and Signals: At approaches to site and on site, install traffic signs and signals at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
1. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.
 2. Relocate traffic signs and signals as Work progresses, to maintain effective traffic control.
 3. Remove equipment and devices when no longer required. Repair damage caused by installation.

1.05 PROJECT INFORMATIONAL SIGNS

- A. Project Identification Sign: Contractor shall provide one (1) project sign. Sign will consist of one (1) 8' x 4' x 3/4" exterior grade plywood with medium or high-density phenolic sheet overlay, painted plywood sign on fence area at construction field office or yard.
1. Information on sign shall include PROJECT NAME, Owner Name, Owner's consultants, etc. Copy will be provided by the Owner.
- B. Painted Informational Signs: Provide at each field office, storage shed and yard, directional signs to direct traffic into and within site. Relocate as Work progress requires. C. Maintain signs and supports: Clean, repair deterioration and damages.
- D. Remove signs, framing, supports and foundations at completion of Project and restore the area.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 55 00

SECTION 01 56 00

TEMPORARY BARRIERS, ENCLOSURES and CONTROLS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Barriers and Enclosures

B. Protected Walkways and Weather Closures

C. Tree and Plant Protection

D. Temporary Controls

1.02 RELATED SECTIONS

A. Section 011000 – SUMMARY OF THE WORK

B. Section 017400 – CLEANING

1.03 BARRIERS AND ENCLOSURES

A. Barricades: Provide to prevent public entry, to protect existing trees and plants, and to protect existing facilities and adjacent properties from damage during construction period. Relocate and extend as construction progress requires. B. Partitions and Ceiling Enclosures:

1. Fire Enclosures-Rated-Corridors and Rated Assemblies: Provide non-combustible dust-proof barrier framed with 20-gauge metal studs spaced 24" o/c maximum and covered on both sides with 5/8" thick Type-X rated gypsum wallboard fire taped, braced so to be self-supporting without fastening to existing finishes.
 - a. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finish.
 - b. Finish exposed surfaces with two (2) coats of paint (color as selected by Owner), maintain in neat, orderly appearance and paint barrier on public side. Temporary emergency exit and or directional signage indicating Emergency Exits will be furnished and installed by Contractor.
 - c. Provide temporary doors in corridors with twenty (20) minute fire-rated assemblies and locksets to limit use.
 - d. Use of access doors and routes by workmen to be approved by Owner's Representative.

2. Fire Retardant Enclosures - Non-Rated Assemblies: Provide non-combustible dust-proof barriers framed with metal studs and covered on public side with Fire Retardant plastic laminate sheathing material. Flame spread 10 - smoke development 45 - fuel contribution undeterminable, as manufactured by Reef Industries, Inc., P.O. Box 33248, Houston, TX77033 or equal.
 - a. Joints shall be taped and sealed over framing studs.
 - b. Bracing shall be self-supporting without fastening to existing finishes.
 - c. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finishes.
 - d. Provide non-staining taped seal to surrounding materials to insure seal.
 - e. Non-Rated Assemblies for Dust Control: Use ½" Type-X or equal gypsum wallboard applied on occupancy side on framing member. Joints over studs shall be taped and sealed. Other detail similar to 1.03-B.2 above.

C. Removal: Remove temporary materials, equipment and construction at completion; repair damage caused by installation or use of barricades and enclosures. Restore existing facilities used during construction to specified or to original condition.

1.04 DIESEL VEHICLE/EQUIPMENT IDLING PROCEDURES

- A. When drivers of diesel powered on-road vehicles arrive at loading or unloading areas to drop-off or pick-up passengers, supplies, equipment, materials, etc., they shall turn off their vehicle's engine as soon as possible but no later than five minutes after arrival.
- B. Operators of off-road diesel-powered equipment shall turn off their engines when the equipment is not performing its primary function, but no later than five minutes after the equipment has come to a stop.
- C. Idling for "warm-up" prior to diesel vehicle or equipment operations on Owner property shall be limited to a maximum of five minutes.
- D. At end of work shift, or for the purpose of servicing, all diesel equipment shall be parked on site at furthest location away from Facility air intake systems.
- E. All diesel-powered equipment shall be maintained in good operating condition. Owner representative will direct Contractor to remove any equipment producing high amount of diesel fumes resulting from diesel equipment being old or in poor operating condition.

1.05 PROTECTED WALKWAYS AND WEATHER CLOSURES

- A. Cover walkways to provide access to existing facilities for use by public and Owner personnel.
- B. Provide temporary roofing and weather-tight insulated closures of openings in exterior wall surfaces, to maintain specified working conditions, to protect products and finished work from inclement weather.

- C. Critical access and protected walkways shall comply with the CBC and CFC.

1.06 TREE AND PLANT PROTECTION

- A. Tree Protection: All trees not marked for removal shall be protected against damage from construction operations. Where necessary, in the opinion of Owner's Representative, trees surrounding building footprint or in close proximity to construction operation shall be protected with barricades. No trees shall be cut or felled without approval of Owner's Representative. Trees cut and/or removed without explicit instruction shall be replaced by Contractor at no cost to the Owner.
- B. Cutting and Pruning: Cutting and pruning of trees to accommodate construction shall be done only with approval and direction by Owner's Representative. Soil within the spread of tree branches (within drip line) shall not be disturbed except as directed by excavation or trenching drawings. Advance notice shall be given Owner if tree roots of 3" diameter or greater must be cut.
- C. Drip line Protection: Cars, trucks, or equipment shall NOT be parked or set within the drip line of any tree; nor shall there be any stockpiling or temporary building erected within the drip line.

1.07 TEMPORARY CONTROLS

- A. Dust Control: Contractor shall take appropriate steps throughout project to prohibit airborne dust due to work under this contract. Execute work by methods to minimize raising dust from construction operations. Water shall be applied wherever practical to settle and hold dust to minimum, particularly during demolition and moving of materials. No chemical dust prohibitor shall be used without written approval by Owner's Representative.
- B. Noise Control: Control noise as directed by Owner's Representative.
- C. Pollution Control: Use of noxious or toxic materials for all applications in alterations or work in buildings occupied by Owner personnel shall be done after proper notification and approval by Owner, this includes work performed on weekends or other unoccupied times.
 - 1. Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- D. Waste Control: All waste materials resulting from process of clearing and construction shall be disposed of as follows:
 - 1. General Refuse: All refuse and debris, combustible and incombustible, resulting from construction process, shall be removed from Owner property as described in the General Conditions of the Contract. Contractor shall not use any refuse container belonging to Owner.
 - 2. Hazardous Refuse: Solvents, oils and any other hazardous material shall be disposed of in containers and removed from site. At completion of work, any contaminated soil shall be removed and replaced with good soil by Contractor at no expense to Owner. Coordinate disposal with Lake County EH&S department.
 - 3. Building materials containing asbestos that are part of the project shall not be disturbed or removed by the contractor during the construction of temporary barriers, enclosures and

controls. The contractor shall request from the Owner's Representative materials that have been identified on the project to contain asbestos so that these materials are not disturbed. The contractor shall refer to Hazardous Materials Procedures regarding materials impacted by construction of temporary barriers, enclosures and controls.

- E. Drainage Control: All portions of Work shall be kept free of standing water at all times during construction. Where required, temporary drainage ditches, berms, or pumping systems shall be constructed to divert drainage water from construction site, and resultant water shall be carried to nearest natural water course and disposed of without erosion to surrounding area. Care shall be taken to prevent silting of existing sinkholes and watercourses. Silt deposited as a result of the Work shall be removed and disposed of by Contractor at no cost to the Owner.
1. Rough grade site to prevent standing water and to direct surface drainage away from excavations, trenches, adjoining properties and public rights-of-way/s.
 2. Maintain excavations and trenches free of water. Provide and operate pumping equipment of a capacity to control water flow.
 3. Provide de-watering system and pumping to maintain excavations dry and free of water inflow on a twenty-four (24) hour basis.
 4. Provide piping to handle pumping outflow to discharge in manner to avoid erosion or deposit of silt. Provide settling basins to avoid silting; install erosion control at out-falls of system.
 5. Winterize and stabilize site with Geotextile Fabric and gravel so that the site drains and avoids it becoming a quagmire. Maintain access roads on the site with Geotextile Fabric and gravel and make repairs to avoid furrow, ruts, or potholes.
 6. Remove equipment and installation when no longer needed.
- F. Sediment and Erosion Control: Contractor shall furnish, install and maintain means and methods to reduce excessive erosion, minimize sedimentation discharge, and prevent construction materials discharge from causing off-site and on-site contamination. Contractor shall coordinate with Owner.
1. Contractor shall pay for and maintain required permits.
 2. Contractor shall furnish:
 - a. National Pollutant Discharge Elimination (NPDE) permit.
 - b. Contractor shall file Notice of Intent to California State Water Resources Control Board (SWRCB) stating date construction will begin. Provide copy to Owner.
 - c. Contractor shall prepare, maintain and follow Storm Water prevention Plan. The Plan shall include Contractor's Best Management Practices (BMP) describing means and methods to control sediment, erosion and other pollutants.
 - d. Contractor shall keep BMP Program at jobsite.

PART II - PRODUCTS

2.01 Polyethylene: Polyethylene used for critical barriers and for sealing walls, floors or ceiling systems shall be a minimum of 6 mil thickness and fire-retardant type listed by Fire Underwriters Laboratories, Griffolyn #T55R with Griffolyn fire retardant tape, or equal.

PART III - EXECUTION

END OF SECTION 01 56 00

SECTION 01 61 00

PRODUCT REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Product Options

- B. Product Substitutions
- C. Product Transportation and Handling Requirements
- D. Product Storage and Protection
- E. Product System Completeness

1.02 RELATED SECTIONS

- A. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- B. Section 013900 - GREEN BUILDING POLICY IMPLEMENTATION
- C. Section 014100 – REGULATORY REQUIREMENTS
- D. Section 014500 – QUALITY CONTROL

1.03 PRODUCTS

- A. Product Selection: Provide products that comply with Contract Documents, are undamaged and unused at installation.
- B. Product Completeness: Provide products complete with all accessories, trim, finish, safety guards and other devices needed for complete installation and for intended use and effect.
- C. Products: Items purchased for incorporation in Work, whether purchased for project or taken from previously purchased stock; this includes materials, equipment, assemblies, fabrications and systems.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model designation indicated in the manufacturer's published product data.
 - 2. Materials: Products that are shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed or installed to form part of the Work.
 - 3. Equipment: A product with operating parts, whether motorized or manually operated, requiring connections such as wiring or piping.
- D. Specific Product requirements: Refer to requirements of Section 014500 – QUALITY CONTROL and other Sections in Division 2 through 49 for specific requirements for products.
- E. Code Compliance: All products, other than commodity products prescribed by Code, shall have current listing service report or research report. Minimum Requirements: Specified requirements are minimum requirements.

- F. Interchangeability: To fullest extent possible, provide products of the same kind from single source. Products supplied in quantity shall be same product and interchangeable throughout the Work. When options are specified for selection of any of two (2) or more products, product selected shall be compatible with products previously selected.
- G. Nameplates: Except for required labels and operating data, do not attach manufacturer's name plates or trademarks on surfaces exposed to view in occupied spaces or on the exterior of building.
- H. Equipment Nameplates: Provide permanent nameplate on each item or service-connected or power-operated equipment. Locate on inconspicuous accessible surface. Nameplate shall contain the following information and essential operating data:
 - 1. Name of product and manufacturer
 - 2. Model and serial number
 - 3. Capacity and Speed
 - 4. Ratings and other pertinent information
- I. Listing Service: Products, for which listing service standards have been established and for which their service label is available, shall bear the appropriate listing service label.

1.04 PRODUCT OPTIONS

- A. Products Specified Only by Description: Where the Contract Specifications describe a product, listing characteristics required, with or without use of a brand name, provide a product that provides the appropriate characteristics and otherwise complies with the requirements.
- B. Performance Specification: Where Contract Specifications require compliance with performance requirements, provide products that comply and are recommended for application. Manufacturer's recommendations may be contained in Product literature, or by certification of performance.
- C. Compliance with Standards: Where Contract Specifications require compliance with a standard, select a product that complies with the standard specified.
 - 1. Wherever catalog numbers and specific brands or trade names followed by the designation "to match existing" are used in conjunction with product(s) required by the Contract Specification, no substitution will be considered.
- D. Products Specified by Naming One (1) or More Manufacturers:
 - 1. Specified manufacturer(s): Provide specified product(s) of the specified manufacturer. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the design used in the Work and the use of alternative-named products or substitutes may require modifications in that design. If such alternatives are proposed by Contractor and are approved by Owner, Contractor shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to Owner for evaluation of revisions and modifications of the design resulting from the substitutions submitted by Contractor.
 - a. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and "or equal" supporting data for second manufacturer's product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitution.

2. Quality Standard: Products(s) of the specified manufacturer shall serve as standard by which the product(s) of other named manufacturers are evaluated.
- E. "Or Equal" Provision: Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by Contract Specification to establish standard of quality, utility, and appearance required.
1. "Or Equal" Products: Equivalent products of manufacturers other than the specified manufacturer may be provided if determined by Owner's Representative to be acceptable in accordance with substitution provisions following:
 - a. Contractor shall submit to Owner's Representative, within thirty-five (35) calendar days after the date of commencement of the Work specified in the Notice to Proceed, a list in excel format containing Specification Section number with extension i.e. 088000 2.B.1.a. with descriptions of each product proposed for substitution.
 - b. Contractor shall provide supporting data as required herein.
 - c. Owner will evaluate Contractor's proposal. The decision of Owner shall be final.
 - d. Owner will accept, in writing, proposed substitutions that are in Owner's opinion equal in quality, utility and appearance to the product specified. Such acceptance does not relieve Contractor from complying with requirement of the Contract Documents.
 - e. Contractor shall be responsible for all costs of any changes resulting for Contractor's proposed substitutions that affect other work, or the Work of Separate Contractor.
 - f. Failure to place orders for specified products sufficiently in advance of required date for incorporation into the Work will not be considered justification for Contractor to request a substitution or deviation from requirements of the Contract Documents. The sixty (60) calendar day submittal period does not excuse Contractor from completing the Work within the Contract Time.
 2. Contractor's Determination: Prior to submitting "or equal" product(s) for consideration, Contractor shall review and determine product(s) meet or exceed the quality and warranty provisions of the specified product.
 3. Late Substitution Requests: If a request for substitution occurs after the sixty (60) calendar day period, the substitution may be reviewed at the discretion of Owner and the costs of such review, as approved by Owner, shall be deducted from the Contract Sum.
 - a. Product Availability Waiver: Substitutions will be considered after the sixty (60) calendar day period only when a product becomes unavailable due to no fault of the Contractor.
- F. Visual Matching: Where Contract Specifications require matching a sample, Owner's decision on proposed product match is final. If no product matches and complies with other requirements, comply with provisions for "substitutions" for selection of a matching product in another category.
- G. Visual Selection: Where requirements include the phrase "....as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product that complies with other

requirements. Owner's Representative will select color, pattern and texture from the product line selected.

1.05 SUBSTITUTIONS

- A. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract shall be considered "substitutions". The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by Owner's Representative or Owner's Consultant.
 - 2. Specified options of products and construction methods included in Contract Documents.
 - 3. Compliance with governing regulations and orders issued by governing authorities.
- B. Substitution Provisions: Requests for Substitutions will only be considered if Contractor submits the following data:
 - 1. Furnish complete technical data including drawings, performance specifications, samples, test reports and any additional information required by Owner's Representative, for each product proposed for substitution.
 - a. Submit ONE (1) PDF file with bookmarks.
 - b. In reviewing supporting data for substitution, Owner will use, for purpose of comparison, all characteristics of Basis of Design specified product as it appears in manufacturer's published data even though all characteristics may not have been particularly mentioned in the Contract Specifications. If more than two (2) substitutions of supporting data are required, Owner's costs of reviewing additional supporting data will be deducted from the Contract Sum.
 - c. Submit statement indicating substitution's effect on the Construction Schedule, if any.
 - d. Submit cost information, including proposal of net deduction, if any, from Contract Sum.
 - 2. Furnish statement by Contractor that proposed substitution is in full compliance with requirements of Contract Documents and Applicable Codes.
 - 3. Provide a Comparison Table as part of the substitution request listing the design and performance criteria of the Basis of Design specified product with the proposed substitution product side by side. The design and performance criteria shall include but not limited to; size, thickness, gauge, strength, function, ASTM rating, test report data, manufacturing association standards & data, technical properties & performance data, traffic or weather resistance, quality assurance data, warranty and other design and performance criteria list in Basis of Design manufactures specification and written material.
 - 4. Furnish list of Subcontractors, if any, that may be affected by the substitution.
 - 5. If proposed substitution requires portions of the Work to be redesigned or removed in order to accommodate substituted product, submit design and engineering calculations prepared by the licensed design professional of record.
 - 6. Contract Document Revisions: Should Contractor-proposed or alternate sequence or method of construction require revision of Contract Documents, including revisions for

purpose of determining feasibility, scope or cost, or revisions for the purpose of obtaining approval by governing authorities having jurisdiction, revisions will be made by Owner's Consultant who is the design professional of record.

- a. Services of Owner's Consultants, including time spent in researching and reporting on proposed substitutions or alternate sequences and methods of construction, shall be paid by Contractor when such activities are considered additional services to the design services contracts of Owner.
- b. Cost of services by Owner's Consultants shall be paid on a time and material basis, based on current hourly fee schedules, with reproduction,

long distance telephone and shipping costs reimbursable. Such fees shall be paid whether or not the proposed substitution or alternate sequence or method of construction is ultimately accepted by Owner and Change Order executed. Such fees owed shall be deducted from the Contract sum on the next Application for Payment.

7. Submit all proposed substitutions in writing to Owner using the Request for Substitution form provided at the back of this Section.

- C. Owner may reject any substitution not proposed as described above and presented within the time prescribed.
- D. Revisions to submittals: If Owner's Representative, in reviewing list of substitutions, requires revisions or corrections to previously accepted Shop Drawings and supplemental supporting data, Contractor shall promptly do so. If any proposed substitution is judged by Owner's Representative to be unacceptable, the specified product shall be provided at no cost to the Owner.
- E. Samples: Samples may be required. Tests required by Owner's Representative for determination of quality and utility shall be made by Contractor's independent testing Laboratory, at expense of Contractor, with prior Owner acceptance of test procedure.

1.06 TRANSPORTATION, DELIVERY AND HANDLING

- A. Transport products by methods to avoid product damage.
- B. Schedule delivery to minimize long-term storage and prevent overcrowding construction spaces. Coordinate with installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
- C. Deliver products in undamaged condition in manufacturer's original sealed container or packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- D. Provide equipment and personnel to handle products by methods to prevent soiling, marring or other damage.
- E. Promptly inspect products on delivery to ensure products comply with Contract Documents, quantities are correct, and to ensure products are undamaged and properly protected. Promptly remove damaged or defective products from site and replace at no adjustment to the Contract Sum and/or Contract Time.

1.07 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store products to facilitate inspection and measurement of quantity or counting of units.
- C. Store heavy materials away from structures in a manner that will not endanger supporting construction.
- D. Store sensitive products in weather-tight enclosures. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation.
 - 1. Maintain temperature and humidity within range required by manufacturer's instructions.
 - 2. Exterior Storage:
 - a. Store products above ground on blocking or skids to prevent soiling, staining and damage.
 - b. Cover products that are subject to damage by the elements with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.
 - c. Store sand, rock, aggregate or other loose granular material in well drained area on solid surfaces. Prevent mixing with foreign matter.
 - 3. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and maintained under required conditions, free from damage and deterioration.
- E. Protection After Installation: Provide barriers, substantial coverings, notices and other materials or methods as necessary to protect installed work from traffic, subsequent construction operations and weather.
 - 1. Maintain temperature and humidity conditions in interior spaces for Work in accordance with manufacturers' instructions for materials and equipment being protected.
 - 2. Remove protective measures when no longer required and prior to Acceptance of the Work.

1.08 SYSTEM COMPLETENESS

- A. The Contract Drawings and Contract Specification are not intended to be comprehensive directions on how to produce the Work. Rather, the Drawings and Specifications are instruments of service prepared to describe the design intent for the completed Work.
- B. It is intended that equipment, systems and assemblies be complete and fully functional even though not fully described. Provide all products and operations necessary to achieve the design intent described in the Contract Documents.
- C. Contractor is urged to report to Owner's Representative immediately when elements essential to proper execution of the Work are discovered to be missing or misdescribed in the Contract Documents or if the design intent is unclear.
- D. Should an essential element be discovered as missing or misdescribed prior to receipt of bids or establishing a negotiated Contract Sum, an Addendum or Clarification will be issued so that all cost may be accounted in the Contract Sum.

- E. Should an obvious omission or misdescription of a necessary element be discovered and reported after execution of the Agreement, Contractor shall provide the element as though fully and correctly described.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSTALLATION OF PRODUCTS

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

3.02 Refer to the following Attachment:

- A. Request for Substitution Form.

END OF SECTION 01 61 00
REQUEST FOR SUBSTITUTION

Substitution #: _____ Submittal #: _____ Date: _____

Specification Project#:

#: _____

PROJECT NAME: _____

<p>COUNTY OF LAKE PUBLIC SERVICES 333 2nd Street TO: Lakeport, CA 95453</p> <p>P: 707-262-1618 C: 707-245-6911</p> <p>Attn.: Project Manager Joseph.Cooper@lakecountycalifornia.gov</p>	<p>FROM:</p>
--	--------------

Name of Party Submitting Request for Substitution:

Reason for Submitting Request for Submission: _____

Specification Section and Paragraph #: _____

Substitution Manufacturer name and address: _____

Proposed substitution (trade name of product, model or catalog #): _____

Fabricators and Suppliers (as appropriate): _____

PRODUCT DATA:

ATTACH PRODUCT DATA AS SPECIFIED IN SPECIFICATION SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Similar projects using product (list dates of installation and names/phone numbers of Owners):

Similar comparison of proposed substitution with specified product (indicate variation(s), and reference each variation to appropriate Specification Section paragraphs):

-ATTACH COMPARISON SUMMARY-

(SUBSTITUTION REQUEST CONTINUES)

Quality and performance comparison between proposed substitution and specified product:

Availability of maintenance services and replacement materials: _____

Effect of proposed substitution on Construction Schedule:_____

Effect of proposed substitution on other work or products: _____

SECTION 01 72 00

PREPARATION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Surveying and Field Engineering Services

1.02 RELATED SECTIONS

- A. Section 014500 – QUALITY CONTROL
- B. Section 017800- CLOSEOUT SUBMITTALS

1.03 REGISTRATION REQUIREMENT

- A. Contractor shall employ civil engineers/land surveyors, which are registered and licensed in the state of California and acceptable to the Owner.

1.04 LINE AND GRADES

- A. Contractor shall provide all construction survey work required for accurate location of the Work. Horizontal and vertical control for the Work shall be from project reference marks as shown on Contract Drawings. Owner's decision will be final in all questions regarding proper location of work.
- B. Contractor shall verify final configuration of project during demolition work. Minor adjustments of work to accommodate existing field conditions shall be responsibility of Contractor.
- C. For work that connects to existing structures with new floors or roofs that align with existing conditions; Contractor shall verify new and existing elevations prior to constructing the new floor or roof structure. Adjust elevations accordingly so that the new and existing floors are level and lineup.
 - 1. Owner approval in writing is required for any deviations from the contract documents intent.
- D. Replace control points that may be lost or destroyed, base requirements on original survey control, at no increase in the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify locations of survey control points prior to starting work. Promptly notify Owner's Representative of any discrepancies discovered.

3.02 SURVEY REFERENCE POINTS

- A. Protect survey control points prior to starting site work; preserve permanent reference points during construction. Make no changes without prior written notice to Owner's Representative.
- B. Promptly report loss or destruction of any reference point or relocation required to Owner's Representative. Replace dislocated survey points based on original survey control.
- C. All control points established for the project must be clearly shown on the record documents.

3.03 SURVEY REQUIREMENTS

- A. Establish minimum of three (3) permanent benchmarks on site, referenced to establish control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements, including pavements, stakes for grading, fill and topsoil placement, utility locations, slopes and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations and ground floor elevations.
 - 4. Controlling lines and levels required for mechanical and electrical work.
 - 5. Verify layouts as Work proceeds to assure compliance with required lines, levels and tolerances.
- C. Periodically certify layouts by same means.

3.04 RECORDS

- A. Maintain complete and accurate log of all control and survey work as it progresses Including but not limited to items indicated in 3.03, B. and 3.04, B.
- B. On completion of foundation walls, underground utilities and major site improvements, prepare certified survey showing all dimensions, locations, angles and elevations of construction. Provide as part of the As-Built Documents per Section 017800.

END OF SECTION 01 72 00

SECTION 01 73 00

CUTTING AND PATCHING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching Work.
- B. Hazardous Conditions Permit requirements for brazing, welding and other hot work.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013100 – COORDINATION
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- E. Section 016100 – PRODUCT REQUIREMENTS
- F. Individual Specifications Sections.
 - 1. Cutting and patching incidental to Work specified in this Section.
 - 2. Coordination with work in other Sections for openings required to accommodate Work specified in those other Sections.

1.03 SUBMITTALS

- A. Contractor shall complete and submit for review to Owner's Representative, a Coring/Sawcutting Form, included at the end of this Section, and obtain written authorization for Owner prior to the commencement of any dig activities. Contractor shall

include all pertinent information with the Coring/Sawcutting Form and submit with detailed work plan fourteen (14) calendar days prior to desired coring/cutting activity.

- 1. Structural integrity of any element of Project.
- 2. Integrity of weather-exposed or moisture-resistant element.
- 3. Efficiency, maintenance, or safety of any operational element.
- 4. Visual qualities of sight-exposed elements.
- 5. Work of Owner.

6. Utility supply, drains, fire alarm, communication. B. Include in request:

1. Identification of Project, including Owner's Project Name and Project Number.
2. Location and description of affected Work.
3. Necessity for cutting and patching.
4. Description of proposed work, and products to be used.
5. Alternatives to cutting and patching.
6. Effect on work of Owner.
7. Written permission of Owner.
8. Date and time work will be executed.

1.04 NOTIFICATIONS

A. Before starting welding or cutting work involving the use of gas or electric welding equipment, or any brazing work involving gas or electric brazing equipment Contractor shall complete a Hazardous Conditions Permit form. Contractor shall allow seventy-two (72) Hours for Fire Marshal's approval and issuance of Hazardous Conditions Permit. This permit will be issued without cost to Contractor and may be applicable to more than one (1) building. Contractor shall be responsible for reporting to Lakeport Fire Department either by telephone or in person at beginning and end of each day's work. Provide minimum written notice of fourteen (14) calendar days prior to such activities.

1. Welding and brazing personnel must be certified by an Owner approved laboratory and must maintain this certification during the work of this Contract.
2. Contractor is responsible for notifying Owner of all apparent locations where suspect asbestos containing materials may be present or discovered during the course of the project such as cement pipes or other insulated material, which may be a result of newly excavated materials below grade or after building systems are opened such as within wall, ceiling or subfloor spaces. When any such location is discovered by Contractor, information relating thereto shall be immediately communicated to Owner's Representative.
3. Where welding and cutting activity is required and suspect painted surfaces are present that will be impacted by the welding or cutting activity, the contractor shall request from the Owner's Representative information regarding laboratory analysis for lead or other hazardous metals in the painted metal components before any cutting or welding is performed. The contractor shall refer to Section 013500 Special Procedures, 1.05 Hazardous Materials Procedures regarding materials impacted by welding and cutting activity.
4. Contractor shall then follow any and all instructions as indicated by Owner's Representative.

PART II - PRODUCTS

2.01 MATERIALS

- A. Product substitution: For any proposed change in materials, submit request for substitution under provision of SECTION 016100 – PRODUCT REQUIREMENTS. Use only materials for cutting, fitting, and patching which comply with the applicable

Specification Sections, and which match adjacent materials. Use materials whose installed performance will equal or surpass that of existing materials.

PART III - EXECUTION

3.01 EXAMINATION

- A. General: Execute cutting, fitting and patching including excavation and fill, to complete Work and:
 - 1. Fit the several parts together, to integrate with other work.
 - 2. Uncover work to install ill-timed work.
 - 3. Remove and replace defective and non-conforming work.
 - 4. Remove samples of installed work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical work.
- B. Examination, General: Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
 - 1. After uncovering existing Work, inspect conditions affecting proper accomplishment of Work.
 - 2. Beginning of cutting or patching shall be interpreted to mean that existing conditions were found acceptable by Contractor.
- C. Ground Penetrating Radar: Determine by Ground Penetrating Radar all existing reinforcing, conduit and piping located in concrete walls and slabs prior to demolition. Clearly mark all locations and review with Owner Representative prior to demolition.

3.02 PREPARATION

- A. Temporary Supports: Provide supports to assure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Weather Protection: Provide protection from elements in all areas that may be exposed by uncovering work. Maintain excavations free of water.
- C. Protection. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas. Do not block required exit ways or stairs.
- E. Protect rated floor, wall and ceiling assemblies. Prior to cutting opening in a rated assemblies review with Owner's Representative and get written approval from the Lakeport Fire District Fire Marshal.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching to properly complete Work.
- B. Coordinate installation or application of products for integrated Work.
- C. Uncover completed Work as necessary to install or apply products out of sequence.
- D. Remove and replace defective or non-conforming Work.
- E. Provide openings in the Work for penetrations of mechanical and electrical Work.
- F. Provide cutting and patching to accommodate all demolition work as part of this contract. Provide level and plumb cuts at locations that will be exposed or to provide smooth and even surface for patching to existing work or surfaces.
- G. Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

3.04 PERFORMANCE

- A. Execute cutting and patching by methods to avoid damage to adjoining Work, and that will provide appropriate surfaces to receive final finishing.
- B. Execute cutting and patching of weather-exposed, moisture-resistant and sight-exposed surfaces by methods to preserve weather, moisture and visual integrity.
- C. Restore work with new Products as specified in individual Sections of Contract Documents.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval from Owner. Coordinate timing of all sawing and cutting work with the Owner's Representative. Do not over saw cut corners and intersection unless written authorization is provided from the Owner Representative and the Structural Engineer of Record.
- E. Fit work neat and tight allowing for expansion and contraction. Butt new finishes to existing exposed structure, pipes, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of firewalls, partitions, ceiling, or floor construction, completely seal voids with UL approved fire-rated assembly. Provide temporary closures at the end of each workday. Closures shall be approved by the Lakeport Fire District Fire Marshal.
- G. Refinish surface to match adjacent finish. For continuous surfaces, refinish to nearest intersection, corner or natural break and from floor to ceiling. For an assembly, refinish unit. All patched surfaces from new to existing shall provide a smooth and even transitions aligning with the adjacent surface with no visible marks, joints, seams, sheen, texture or color difference.
- H. Where new construction is to join with or match existing work, it shall be finished exactly to that work so as to form a complete unified and finished element.
- I. Visual Requirements: Do not cut and patch operating elements or related components in a manner that would, in the Owner's Representative's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in

visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner, including by not limited to.

1. Repair and patch in areas where finishes have been visually disturbed by cutting and patching to the nearest intersections.
2. Processed concrete finishes
3. Firestopping
4. Acoustical ceilings
5. Flooring
6. Carpeting

3.05 Refer to the Following Attachment A.

Coring/Sawcutting Notification

END OF SECTION 01 73 00

CORING/SAWCUTTING NOTIFICATION

TITLE: _____

PROJECT#: _____ LOCATION: _____

TRACKING NUMBER:
(Provided by PO&M)

Spec #: _____ DATE: _____

TO:	COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 <u>Project Manager:</u> <u>Joseph.Cooper@lakecountyca.gov</u>	FROM:	
-----	---	-------	--

SCOPE:

HAS USA BEEN NOTIFIED?

☐

YES

☐

NO

When? _____

ARE ALL KNOWN UTILITIES

☐

By

☐

Whom? _____

MARKED? YES NO

LOCATION OF WORK SHOWN ON

☐☐

Purpose: _____

ATTACHED SITE PLANS? YES NO

DATE(S) CORING OR SAWCUTTING WILL TAKE PLACE:

Signed: _____

LAKE COUNTY USE ONLY

DATE RECEIVED:

WHO FROM OWNER WILL AUTHORIZE, SUPERVISE AND VERIFY? PHONE:

Utilities Verified by IOR? YES ☐ NO ☐
PO&M Fire Telecom ☐ Occ. Safety ☒ Activities ☐ ☐ coordinated with:
☐ Other (Itemize):

COMMENTS:

Owner Representative

PO&M: _____

Signed: DATE

AUTHORIZED:

COMPLETION DATE:

COMMENTS:

(Unknown Utilities Encountered,
Disruptions, Successes, Weather,
etc.)

SIGNED: _____

Copies to: Owner Consultants, Facilities Maintenance, Fire, Telecom, File, Others:

SECTION 01 74 00

CLEANING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Cleaning.
- B. Requirements for cleaning during progress of Work, at Substantial Completion of Work and at Acceptance of Work.
- C. Disposal of waste materials, debris and rubbish during construction.

1.02 RELATED SECTIONS

- A. General Conditions of the Contract: Cleanup.
- B. Additional Requirements: Cleaning for specific products or elements of Work are described in Specification Sections describing that Work.

PART II - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning agents and materials that will not create hazards to health or property and that will not damage surfaces.
- B. Use only those cleaning agents, materials and methods recommended by manufacturer of the material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning agent manufacturer.

2.02 EQUIPMENT

- A. Provide covered containers for deposit of waste materials, debris, and rubbish.
- B. Provide at each entry point to the Work, and at other areas as directed by Owner's Representative, a clean room sticky mat. Replace mats daily or as requested by Owner Representative.

PART III - EXECUTION

3.01 CLEANING

- A. Construction Cleaning: During Construction, maintain buildings, premises and property free from waste materials and rubbish. Dispose of such waste and debris at reasonable intervals off of Owner property.
 - 1. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.

2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to closing such spaces.
 - a. All horizontal surfaces above ceilings shall be cleaned prior to ceiling closure.
 3. After every concrete placement clean all wet concrete from all surfaces.
 - a. Interior and exterior
 4. Clean interior areas daily to provide suitable conditions for Work. Remove debris from areas of work on a daily basis at a minimum, or more often as required to provide suitable conditions for work.
 5. Broom clean with sweeping compound or HEPA Vacuum interior areas prior to start of surface finishing, and continue cleaning on an as needed basis.
 6. Control cleaning operations so that dust and other particles will not adhere to wet or newly coated surfaces.
 7. Provide a mat, as specified above, for project entrances and exits. Item to be of sufficient size to allow personnel exiting project site to clean debris and dust from shoes. Tracking dust and debris through working areas of the facility and/or related buildings is not acceptable.
 8. Any dust or debris tracked out of the construction site, either by foot traffic or by debris hauling vehicles shall be cleaned by the contractor. If the dirt or other debris is determined by the Owner's Representative to from the contractor's activities at the jobsite it shall be cleaned in a timely manner regardless of how far from the site it is.
- B. Conduct cleaning and disposal operations in compliance with Waste Management Program per 013900 and all applicable codes, ordinances, regulations, including antipollution laws.

3.02 SUBSTANTIAL COMPLETION CLEANING

- A. Execute a thorough cleaning prior to Substantial Completion review by Owner's Representative.
- B. At roof areas remove all unused materials and construction waste including but not limited to screws, nails, fasteners, sheet metal cuttings, scrapes, oil, grease and adhesive. Wash down roof horizontal and vertical surfaces. Clean out all debris at roof drains.
- C. Clean walkways, driveways and streets by thorough brooming and wash-down.
- D. Clear debris from storm drainage lines and ways, leaving site ready for stormy weather.
- E. Rake landscaped areas clean.
- F. Remove waste and surplus materials, rubbish and temporary construction facilities, utilities and controls.
- G. Disinfect containment and protection areas as directed by Owner Representative.

- H. For Airborne Contamination areas: Construction cleaning use wet cleaning methods and HEPA-filtered vacuum cleaners are required to minimize release of airborne contaminants. Contain waste materials, debris and rubbish.

3.03 FINAL COMPLETION CLEANING

- A. Complete final cleaning before submitting final Application for Payment.
- B. Employ professional building cleaners to thoroughly clean building immediately prior to final inspection.
- C. Remove the following but not limited to concrete splatters, paint splatters, pencil marks, pen marks, chalkline marks, tape, protective films & coatings, grease, mastic, adhesives,

dust, dirt, stains, fingerprints, labels, and other foreign materials from all sight-exposed interior and exterior surfaces.
- D. Restore damaged or marred surfaces.
- E. Remove dust from all horizontal surfaces not exposed to view, including light fixtures, ledges and fixture lenses.
- F. Clean and polish all glass, mirrors, and bright metal work. Clean and disinfect all plumbing fixtures.
- G. Damp wash all resilient flooring. Waxing of resilient flooring shall be done by the Owner.
- H. Thoroughly sweep all floors and vacuum all carpets.
- I. Cleaning of Work provided by Owner under separate contracts, will not be required except if soiled by construction activities under this Contract.
- J. Thoroughly clean and polish all resilient flooring, metal and plastic surfaces; remove labels and protective coatings.
- K. Replace filters and clean heating and ventilating equipment used for temporary heat and ventilation.
- L. Remove waste material or equipment that has been damaged, touch up and /or repair exposed areas; such repairs to be approved by Owner's Representative.
- M. Should final cleaning be inadequate, as determined by Owner's Representative, and Contractor fails to correct conditions, Owner's Representative may order thorough cleaning and deduct the cost from Final Payment.

3.04 FINAL COMPLETION SITE CLEANING

- A. Broom clean exterior paved surfaces. Rake clean other surfaces of the grounds.
- B. Power Wash, Hose down and scrub where necessary all concrete and walks dirtied as a result of the construction work. Thoroughly remove mortar droppings from all walks and pavements.
- C. Remove from the site all tools, equipment, construction waste, unused materials, excess earth, and all debris resulting from the Work.

3.05 DISPOSAL

- A. Conduct cleaning and disposal operations in compliance with all applicable codes, ordinances, regulations, including anti-pollution laws.
- B. Do not bury or burn rubbish or waste material on Owner premises.
- C. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
- D. Remove waste materials, debris, and rubbish from site and dispose of off-site.

3.06 INSPECTION

- A. Prior to Beneficial Occupancy, Substantial Completion or Final Completion; Contractor and Owner's Representative shall jointly conduct an inspection of sight-exposed interior and exterior surfaces to verify that entire Work is clean.

END OF SECTION 01 74 00

SECTION 01 75 00

STARTING AND ADJUSTING SYSTEMS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Starting Systems

1.02 RELATED SECTIONS

- A. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES
- B. Section 018200 – DEMONSTRATION AND TRAINING
- C. Section 019100 - COMMISSIONING
- D. Division 22
- E. Division 23
- F. Division 25
- G. Division 26
- H. Division 27

1.03 SUBMITTAL REQUIREMENTS

- A. Submit preliminary schedule listing times and dates for start-up of each item of equipment in sequence in writing, minimum of ninety (90) calendar days prior to any start-up.
 - 1. Start up, testing and Commissioning of equipment shall be integrated and coordinated with the contract schedule.
 - a. Adjustments will be made as project progresses, but the sequencing will be maintained.
- B. Submit manufacturer's representative reports within one (1) week after start-up, listing satisfactory start-up dates.
- C. Provide information, manufacturer and model number of all testing equipment to be used and current certification that the testing equipment has been calibrated within the last 6 months.
- D. Maintain log with dates and results of Starting and Adjustments, and provide electronic copy to Owner's Representative.

1.04 PROJECT CONDITIONS

- A. Building enclosure shall be complete and weather-tight.
- B. Excess packing and shipping bolts shall be removed.
- C. Interdependent systems shall have been checked and made operational.
- D. Permanent Power is connected and operational to the building.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify Project conditions comply with requirements for start-up.
- B. Verify status of Work meets requirements for starting equipment and systems.

3.02 PREPARATION

- A. Coordination: Coordinate sequence for start-up of various item of equipment.
- B. Notification: Notify Owner in writing, minimum of fourteen (14) calendar days prior to startup of each item of equipment.
- C. Contractor Quality Assurance Manager shall take the lead role for Starting and Adjusting the equipment; coordinate and work with the Owner's Representative and Inspectors throughout the entire process.
 - 1. Coordinate all start-up with the Commissioning Agent for the project.
- D. Information on hand: Have Contract Documents, shop drawings, product data, and operation and maintenance data at hand during entire start-up process.
- E. Verify each piece of equipment is anchored correctly per the manufacturer's requirements and the Contract Documents prior to energizing or starting.
- F. Verify each piece of equipment is connected to the correct power source, the breaker and conductors are the correct size. Overcurrent protection in place and required shut offs adjacent to the equipment are in place.
- G. Verify each piece of equipment has been checked for proper lubrication, drive rotation, belt tension, control sequence, and other conditions that may cause damage prior to energizing or starting.
- H. Verify control systems are fully operational in automatic mode.
- I. Manufacturer's Criteria: Verify tests, meter readings and specific electrical characteristics agree with electrical equipment manufacturers' criteria.

- J. Bearings: Inspect for cleanliness: clean and remove foreign matter, verify alignment. Take corrective action as required.
- K. Drives: Inspect for tension on belt drives, adjustment of vari-pitch sheaves and drives, alignment, proper equipment speed, and cleanliness. Take corrective action as required. Verify shaft grounding protection is in place.
- L. Motors: Verify motor amperage agrees with nameplate value. Inspect for conditions that produce excessive current flow and that exist due to equipment malfunction. Take corrective action as required. Verify shaft grounding protection is in place.

3.03 STARTING SYSTEMS

- A. Execute start-up under supervision of responsible Contractor personnel.
- B. Place equipment in operation in proper sequence in accordance with sequencing schedule and the contract schedule.
- C. Follow manufacturer's requirements and recommendations for Starting and Adjusting, including any Owner requirements that may be listed in the Contract and Construction Documents.
- D. Equipment manufacturers representatives shall be on site for Starting and Adjusting that equipment.
- E. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- F. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- G. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

END OF SECTION 01 75 00

SECTION 01 76 00

PROTECTION of EXISTING and INSTALLED CONSTRUCTION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Protection for Products Including Owner Provided Products, After Installation.
- B. Protection of Existing Utilities, Interference and Underground Structures.
- C. Protection of Existing Structures and Work adjacent to new construction and demolition.

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 015100 – TEMPORARY UTILITIES

1.03 EXISTING UTILITIES

- A. Known Utilities: Known existing utilities are shown on Contract Drawings in approximate locations. Contractor shall exercise care in avoiding damage to existing facilities. Contractor shall be responsible for repair of same if damaged through Contractor's action. Hand excavation shall be utilized when digging in close proximity to existing utilities. Owner does not guarantee that all utilities or obstructions are shown, or that locations indicated are accurate.
- B. As part of the Contract Work the investigation and excavation to locate existing utilities and underground structures shall be as follows, Contractor shall assume the existing known utility is within a 5 feet zone on either side of the location indicated on the Contract Documents. If the existing known utility is not located within a 5 feet zone on either side of the location indicated on the Contract Documents, the Contractor shall immediately notify the Universities Representative. The Contractor shall continue excavating until the existing utility is located. The Contractor shall be compensated for any additional excavation beyond the 5 feet zone on either side of the existing utility per 1.03D.
- C. Electrical Equipment: No work shall be performed on energized electrical equipment unless scheduled with Owner's Representative. Owner reserves right to specify specific conditions for all work involving energized high voltage electrical equipment and its scheduled modification proposal.
- D. Uncovering Facilities: Prior to any earthwork for new construction, Contractor shall uncover all existing piping where crossings, interferences or connections are shown on Contract Drawings, from one (1) foot below proposed construction limit to the existing ground surface. Any variation in actual elevations and indicated elevations shall be brought to Owner's Representative attention. If Contractor does not expose all existing utilities, Contractor shall not be entitled to additional compensation for work necessary to avoid unknown interferences.

- E. Interferences: If interferences occur at locations other than general locations shown on Contract Drawings, and such utilities are damaged before such locations have been established, or create an interference, Contractor shall immediately notify Owner's Representative and a method for correcting said interference shall be supplied by Owner. Payment for additional work due to interferences not shown on Contract Drawings shall be in accordance with the General Conditions of the Contract. Cost of repair to damaged utilities shall be deducted from the Contract Sum.
- F. Accuracy of Drawings: Drawings showing location of equipment, piping, etc. are diagrammatic and job conditions will not always permit installations in locations shown. When a conflict situation occurs, immediately bring to attention of Owner's Representative for determination of relocation.
- G. Deviations from Drawings: Information shown relative to existing power and signal service is based upon available records and data but shall be regarded as approximate only. Minor deviations found necessary to conform with actual locations and conditions shall be made at no change to the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PROTECTION AFTER INSTALLATION

- A. Installed Equipment and Materials: Adequately protect all installed equipment and materials until completion and acceptance by Owner's Representative.
- B. Existing Facilities: All existing areas, improvements and facilities shall be protected from damage of any type resulting from operations, equipment or workers of Contractor during the construction process.
- C. Subsequent Operations: Protect installed products and control traffic in immediate area to prevent damage from subsequent operations.
- D. Traffic Areas: Provide protective coverings at walls, projections, corners, and jambs, sills, and soffits of openings in and adjacent to traffic areas.
- E. Elevators: Cover walls and floors of elevator cabs, and jambs of cab doors, when elevators are used by construction personnel. Protect the elevator call buttons, switches, communication devices, lights, thresholds and other components.
- F. Moisture and Humidity Protection: Protect all new installed work and existing work per the manufacturer's requirements from moisture or humidity damage including but not limited to stored materials, finishes, gypsum board, insulation, doors, casework, millwork, equipment and all other building components.
- G. Finished Floors: Protect finished floors and stairs from dirt, wear, and damage:
 - 1. Secure heavy sheet goods or similar protective materials in place, in areas subject to foot traffic.

2. At all transitions to adjacent areas not under construction.
3. Lay rigid materials in place in areas subject to movement of heavy objects and where storage of products will occur. H. Waterproofed and Roofed Surfaces:
 1. Restrict use of surfaces for traffic of any kind, and for storage of products.
 2. When an activity is mandatory, obtain recommendations for protection of surfaces from manufacturer. Install protection and remove on completion of activity. Restrict use of adjacent unprotected areas.
 3. No Construction work shall be conducted on any unprotected roof weather new or existing.
 4. All pathways to work on the roof shall be protected.
- I. Lawns and Landscaping: Restrict traffic of any kind across planted lawn and landscaped areas.
- J. Adjacent Facilities: Care shall be exercised to prevent damage to adjacent facilities including walks, curbs, and gutters. Adequate protection shall be placed where equipment will pass over such obstructions, and facilities damaged by construction operations shall be removed and replaced at Contractor's expense.

3.02 Protection of Existing Structure and Work adjacent to new construction and demolition.

- A. The Contractor shall protect existing in place work at the exterior and interior, including but not limited to finishes, materials, products, utilities, fixtures, and equipment adjacent to new construction and demolition. Any existing in place work at the exterior and interior that is damaged by the Contractor shall be repaired or replaced at no extra cost to the Owner.
- B. Overloading: Contractor shall be responsible for overloading any part or parts of structures beyond the calculated capacities of the design. Placing materials, equipment, tools, machinery, or any other item shall be done with care to avoid overloading. No loads shall be placed on floors or roofs before they have attained their permanent and safe strength.
- C. Damaged Work: All damaged work shall be replaced, repaired, and restored to its original condition without change to the Contract Sum. Repair or replace all damaged work promptly as directed by Owner's Representative.
- D. Damaged Utilities: Where existing utilities are damaged or disrupted on account of any act, omission, neglect, or misconduct of the Contractor in the manner or method of executing the Work, or due to non-execution of work, such damage shall be immediately repaired to maintain operation regardless of the time of occurrence.
- E. Temporary Construction: Provide temporary construction necessary for protection of building and its parts. Close in buildings as soon as possible to protect from weather and vandalism. Protect existing buildings and controlled temperature areas from damage.

- F. Doors and Casework: Protect doors, millwork and mill counters and cases and hardware from damage, including abrading and scratching of finishes. Protect doors and frames and hardware from mechanical damage and damage to anodic coatings.
- G. Protective Coatings: Remove protective coatings, etc., as required to leave work in condition for painting and finishing, final cleaning, etc.
- H. Exterior Work: Protect all exterior work, including existing asphalt paving and landscaping and buildings.

END OF SECTION 01 76 00

01 77 00 CLOSE OUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Substantial Completion procedures.
 - 2. Final Acceptance Procedures.
 - 3. Final cleaning.
 - 4. Repair of Work

1.3 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Substantial completion: Prior to Substantial Completion, complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion.
 - 1. Notify Owner's Representative that project is ready for inspection. Participate with Owner in conducting inspection.
 - 2. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 3. Submit closeout submittals, including project record documents, operation and maintenance manuals, damage or settlement surveys, as-builts, and similar final record information.
 - 4. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

1.4 FINAL COMPLETION PROCEDURES

- A. Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Notwithstanding the "Payment to Contractor" provisions set forth in the General Conditions, submit a final Application for Payment according to Section 012900 "Payment Procedures." No later than seven (7) days after work is complete, conduct a post-dredge survey. Submit to Owner for review and approval.
 2. Certified List of Incomplete Items: Submit certified copy of Owner's Representative Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owner's Representative. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit final inspection report.
 4. Submit final completion photographic documentation.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Owner's Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection Procedure: The Engineer will reinspect the Work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Engineer.
 2. Upon completion of reinspection, the Engineer will prepare a certificate of final acceptance, or advise the contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 3. If necessary, reinspection will be repeated.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list items applying to each space by major element.
 2. Submit list of incomplete items.

PART 2 - PRODUCTS (not applicable)

PART 3 – EXECUTION

3.1 FINAL CLEANING:

- A. Conduct cleaning and waste-removal operations.

1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

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

3.2 REPAIR OF WORK

A. Complete repair and restoration operations, before requesting inspection for determination of Substantial Completion.

END OF SECTION

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Equipment Data

- B. Operation and Maintenance Instructions
- C. Instruction of Owner personnel
- D. Schedule of Submittals
- E. Spare Parts and Maintenance Materials
- F. Guarantees, Warranties, Bonds, Service and Maintenance Contracts
- G. Project As-built Documents

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Administrative general requirements for submittals.
- D. Section 014500 – QUALITY CONTROL: Manufacturer's tests and inspections as a condition of warranty.
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 016100 – PRODUCT REQUIREMENTS
- G. Section 017700 – CLOSEOUT PROCEDURES

1.03 FILE FORMATS

- A. All printed documents submitted per this section shall be in PDF format
 - 1. The PDF files will be unlocked and searchable.
 - 2. All PDF documents will be bookmarked.
 - 3. The exception to electronic format for As-Built drawings will be noted in the specific specification section where they are required.
- B. Digital Photography
 - 1. All files will be submitted in JPEG

1.04 EQUIPMENT DATA AND OPERATION AND MAINTENANCE (O&M) INSTRUCTIONS

- A. Preparation of data shall be done by persons:
 - 1. Trained and experienced in maintenance and operation of described products.
 - 2. Familiar with requirements of this Section.
 - 3. Skilled in technical writing to extent required for communication of essential data.
 - 4. Skilled as drafters competent to prepare required drawings

- B. O&M Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at time of Section Submittals. Submit reviewed manual content formatted and organized as required by this Section. Prepare in the form of a data and instructional manual.

- C. Submit PDF electronic files of operation and maintenance manuals. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to the Owner. The exception to electronic format will be indicated in the specific specification section requiring hard copies of the manual.
 - 1. Name each indexed document file in composite electronic index with applicable item name. Include a completed electronically linked operation and maintenance directory.
 - a. List Project title and Project number and particular building as applicable.
 - b. Enable inserted reviewer comments on draft submittals.
 - 2. Organization: Arrange content by systems under Section numbers and sequence in accordance with the Project Specifications Table of Contents.

- D. Table of Contents, Each Volume: Provide title of Project, Project number, with names, addresses, and telephone numbers of Owner's Representative, as applicable, and Contractor, including name of contact person. Provide schedule of products and systems, indexed to content of the volume.
 - 1. For each Product or System: List names addresses and telephone numbers of subcontractor, original supplier and manufacturer, as applicable, including name of contact person. Include name and address of local source of supplies and replacement parts.
 - 2. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete information not applicable.
 - 3. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project As-Builts Documents as maintenance drawings.
 - 4. Additional Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in SECTION 014500 – QUALITY CONTROL.
 - 5. Warranties and Bonds: Include in each applicable section.

- E. Manual for Materials and Finishes:

1. Building Products, applied Materials, and Finishes: Provide PDF composite electronically indexed file. Include product data, with catalog number, size, composition, and color and texture designations. Provide information for reordering custom manufactured Products.
2. Instruction for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
3. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
4. Additional Requirements: As specified in individual Specification Sections.
5. Table of Contents: Provide PDF electronic file with links to individual sections.

F. Manual for Equipment and Systems

1. Record Instructions: Forward to Owner's Representative, upon completion of work, and before work will be considered for acceptance, complete PDF composite electronically indexed file of instructions of entire plant and component parts, including manufacturer's certificates, warranty slips, parts lists, descriptive brochures, and maintenance and operating instructions, in quantities set forth in various Divisions. Submit drafts for review before preparing final PDF electronic file.
2. O & M Instructions: Provide and install, where directed, printed sheet under clear plastic cover, giving concise operating and maintenance instruction for equipment.
3. Each Item of Equipment and Each System: Inclusive description of unit or system, Model Number, Serial Number, and component parts. Identify function, normal characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts. Best to include all information provided in final approved equipment submittal. Design drawing shall be updated to reflect what was actually provided.
4. Panelboard Circuit Directories: Provide electrical service characteristics, controls and communications.
5. Wiring Diagrams: Include color-coded wiring diagrams as installed.
6. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and any special operating instructions.
7. Maintenance Requirements: Include routine procedures and guide for troubleshooting; disassembly, repair, and re-assembly instructions; and alignment, adjusting, balancing, and checking instructions. Provide servicing and lubrication schedules, and list of lubricants required.
8. Instructions: Include manufacturer's printed operation and maintenance instructions. Include sequence of operation by controls manufacturer.
9. Parts Data: Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
10. Control Data: Provide as installed control diagrams by controls manufacturer.

11. Piping Data: Provide Contractor's coordination drawings, with color piping diagrams as installed. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
 12. Design Data: Provide a listing in table of Contents for design data, with tabbed binder divider page and space for insertion of data.
 13. Reports: Include test and balancing reports as specified.
 14. Additional Requirements: As specified in individual Specification Sections.
- G. Instruction of Owner's Personnel: Instruct Owner designated personnel to their full and complete understanding, procedures necessary to operate and maintain equipment and systems on continuing basis. Provide training of staff.
1. Schedule: Before final inspection, instruct Owner designated personnel in operation, adjustment, and maintenance of products, equipment, and systems, at agreed upon times. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
 2. Basis of Information: Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
 3. Instructional Material: Prepare and insert additional data in the manual when need for such data becomes apparent during instruction.
- H. Equipment Data and Operation and Maintenance Instructions Submittals:
1. Submittals: Comply with administrative requirements specified in SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
 2. Preliminary Draft O&M Submittal: Submit electronic files of each manual at least 90 calendar days before commencing demonstration and training. Owner's Representative will review draft and return with comments.
 - a. The comments or corrections shall be incorporated into the Final O&M submittal.
 - b. Correct or revise each manual to comply with the Owner's Representatives comments. Submit electronic copies of each corrected manual within 15 calendar days of receipt of Owner's Representative's comments.
 - c. Owner's Representative will notify the Contractor when the edits have been accepted for incorporation into the final O&M submittal.
 3. Advance Submittals: For equipment, or component parts of equipment to be put into service during construction and operated by Owner, submit documents within ten (10) calendar days after equipment approval.
 4. Final O&M Submittal: After completion of instruction of Owner operation and maintenance personnel and final inspection, revise content of documents to include additional information deemed necessary from instruction experience of Owner's personnel and any changes made during construction. Submit each manual in the final form prior to requesting inspection for Substantial Completion. The Owner's Representative will return comments electronically.

- a. Submit electronic copies of each manual prior to requesting training.

1.05 SPARE PARTS, EXTRA STOCK AND MAINTENANCE MATERIALS

- A. Products Required: Where called for in Contract Specifications, deliver to Owner's Representative, materials, etc., for use in maintenance work. Provide list of materials delivered to Owner's Representative, indicating date and acceptance by Owner's Representative.
 1. Provide quantities of products, spare parts, maintenance tools, and maintenance materials specified in individual Sections to be provided to Owner's Representative, in addition to that required for completion of the Work.
 2. Products supplied shall be identical to those installed in the Work. Include quantities in original purchase from supplier to avoid variations in manufacture.
 3. Provide itemized list of all spare parts, materials and transmittal to the Owner's Representative for acceptance.
- B. Storage, maintenance: Store products with products to be installed in the Work, as specified in SECTION 016100 – PRODUCT REQUIREMENTS: Product Storage and Protection.
- C. Delivery to site: Prior to final payment, deliver and unload spare products to project site. Coordinate with Owner's Representative and obtain receipt. Owner will handle and store products.

1.06 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 1. List of Documents: Include a table of contents for each O&M and emergency, operations listed per CSI Specification number.
 2. List of Systems and Subsystems: Include references to operation and maintenance manuals that contain information about each system.
 3. List of Equipment: List equipment for each system, organized by system. For pieces of equipment not part of system, list separately.
 4. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists,

assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."
 5. This Directory shall be submitted to the Owner's Representative for review and acceptance.

1.07 MAINTENANCE AGREEMENTS

- A. Prior to Closeout all Maintenance Agreements required by the Contract Documents shall be assembled and submitted electronically with the Closeout Submittal Requirements.
 1. Provide all Maintenance Agreements in PDF form.

a. Submit individual files for each Maintenance Agreement with a directory assembled by CSI division.

- 1) Combine all project Maintenance Agreements including the directory into one PDF for record.
- 2) Files will be formatted for printing with a footer identifying the CSI number and Owner's project number.
- 3) There will be a front cover to the file that contains all project information including the Contractor contact information.

1.08 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties. D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

1.09 WARRANTIES AND GUARANTEES

A. Warranties and Guarantees, general: Guarantees from subcontractors shall not limit Contractor's warranties and guarantees. Whenever possible, Contractor shall cause warranties of subcontractors to be made

directly to Owner. If such warranties are made to Contractor, Contractor shall assign such warranties to Owner prior to final payment. When equipment and products, or components thereof, bear a manufacturer's warranty or guarantee that extends the time period of Contractor's warranty or guarantee, so state in the warranty or guarantee.

1. Standard Product Warranties: Preprinted written warranties published by individual manufacturers for particular products and specifically endorsed by manufacturer to Owner.
 2. Special Warranties: Written warranties required by or incorporated in Contract Documents, to extend time limits provided by standard warranties or to provide greater rights for Owner.
 3. Provisions for Special Warranties: Refer to General Conditions of the Contract for terms of Contractor's special warranty of workmanship and materials.
 4. Specific Warranty Requirements: requirements are included in the individual Sections of Division 2 through 49 of the Contract Specifications, including content and limitations.
 5. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractor's requirement to countersign special warranties with Contractor.
 6. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.
 7. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to original warranty with an equitable adjustment for depreciation.
 8. Replacement Cost: On determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents. Contractor shall be responsible for cost of replacing or rebuilding defective work regardless of whether Owner has benefited from use of the work through part of its useful service life.
 9. Owner Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which Owner can enforce such other duties, obligations, rights, or remedies.
 10. Rejection of Warranties: Owner reserves right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
 11. Owner reserves right to refuse to accept work where a special warranty, or similar commitment is required, until evidence is presented that entities required to countersign commitments are willing to do so.
 12. When designated portion of Work is completed and occupied or used by separate agreement with Contractor during the construction period, submit properly executed warranties to Owner's Representative within fourteen (14) calendar days of completion of that designated portion of the Work.
 13. Submit written guarantees, in the form contained at end of this Section.
- B. Form of Warranty or Guarantee: All written warranties and guarantees, excepting manufacturers' standard printed warranties and guarantees, shall be submitted on Contractor's, subcontractor's, material supplier's, or manufacturer's own letterhead, addressed to Owner. Warranties and

guarantees shall be submitted in duplicate and complying with the form letter following. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved by Owner to suit the conditions pertaining to the warranty or guarantee. C. Submission requirements:

1. Contractor shall collect and assemble required warranties, guarantees, bonds, and service and maintenance contracts. Provide PDF electronically signed or signed and scanned copies of each. Organize documents into an orderly sequence based on the table of contents of the Project Manual CSI divisions.
2. Table of Contents: Provide PDF electric file with links to individual warranty sections. Include the following information.
 - a. Product or Work item.
 - b. Product or work suppliers firm name, address, telephone number and name of principal.
 - c. Scope of guarantee, bond, service or maintenance agreement.
 - d. Date of beginning of guarantee, bond, service or maintenance contract.
 - e. Duration of guarantee, bond, service or maintenance contract.
 - f. Contractor's name, address, telephone number and name of principal.
 - g. Provide information for Owner personnel:
 - 1) Proper procedure in case of failure.
 - 2) Circumstances that might affect validity of guarantee or bond.

D. Warranty Submittal

1. Provide all warranties in PDF composite electronically indexed files.
 - a. Submit individual files for each warranty with a directory assembled by CSI division.
 - 1) Combine all project warranties including the directory into one PDF for record
 - 2) Files will be formatted for printing with a footer identifying the CSI Number and Owner's Project Number.
 - 3) There will be a front cover to the file that contains the title "WARRANTY, GUARANTEE AND BOND" as well as all project information including the Contractor contact information. Title of Project and UC Davis Health Project Name and Number.
 - 4) Coordinate copies of each warranty to be included in operation and maintenance manuals.
 - 5) Final Submittal shall be incorporated into one PDF, bookmarked and searchable document.

F. Time of Submittals: Submit 60 calendar days prior to request for final payment. When work activity is delayed materially beyond date of Substantial Completion, provide updated submittal within ten (10) calendar days after Final Completion, listing date of Final Completion as the start of the Guarantee period.

1.10 AS-BUILT DOCUMENTS

A. Definitions:

1. The terms "As-Built Documents" or "As-builts" shall mean the marked-up version of the Contract Documents prepared by Contractor to record as-built conditions, changes, and selections made during construction.

B. Preparation of data shall be done by person(s):

1. Trained and experienced in the maintenance, preparation, and submittal of AsBuilt Documentation.
2. Familiar with requirements of this Section.

C. As-built Documents Content:

1. As-built Drawings and Specifications
2. As-built Schedule
3. Miscellaneous As-Built Submittals

D. As-Built Drawings and Specifications: Provide a complete set of As-Built Drawings and Specifications, showing and noting every change from the Contract Set, including but not limited to:

- Changes made in response to RFI's
- Amended Construction Documents (ACD) and related RFI's ☐ Change Orders/Field Orders and related RFI's.
- Architect's Supplemental Information (ASI) and related RFI's.
- Changes to locations, including access panels, windows, doors, plumbing, etc.
- Changes caused by obstructions and the obstructions notated
- Changes made in response to inspections
- Final dimensions
- Deferred Submittals (see "Miscellaneous As-Built Submittals" below)
- Shop Drawings (see "Miscellaneous As-Built Submittals" below)
- Final product selections

1. Format Requirements:

- a. Provide in PDF format with bookmarks. All annotations shall be neat and legible.
- b. File naming conventions:
 - 1) Drawings: YY_MMDD_Owner's Project Number_AsBuilt_Dwgs

- 2) Specifications: YY_MMDD_Owner's Project Number_As-Built_Spec
 - c. Provide text (preferably 1/4" or larger) on each drawing and on the cover of the specifications indicating the submission date, the Owner's Project Number, and the term "As-Builts". The text shall be the same size and general location on all sheets of the drawings and care should be taken to locate the text in a place as to not obscure text or linework on the drawings.
 - d. Bookmarks: Provide bookmarks in the following format:
 - 1) Drawings: Sheet Number – Sheet Name. Do not add additional categories or disciplines.
 - 2) Specifications: The first page of each section shall be bookmarked with: Section Number – Section Name.
 - Exception: If a hyperlinked Table of Contents is provided the bookmarks may be excluded.
 - e. Supplemental sheets: When adding a supplemental sheet containing sketches or other information that describe changes to the Contract Documents:
 - 1) Provide a two-digit numerical suffix that starts with .01 and ascends for every supplemental sheet:
Example: If the supplemental sheet contains sketches that describe changes to the hypothetical sheet "A1-01" the first supplemental sheet will be numbered "A1-01.01".
 - 2) The sheet name and number are to be similar in text size and location to the sheet being supplemented.
 - 3) Include supplemental sheets in bookmarks.
- E. As-Built Schedule: Provide As-Built schedule per SECTION 013200 CONTRACT SCHEDULES
1. Format Requirements:
 - a. Schedule to be in PDF format.
 - b. File naming conventions:
 - 1) YY_MMDD_Owner's Project Number_As-Built_Schedule
- F. As-Built Shop drawings:
1. Format Requirements:
 - a. File naming convention for shop drawings:
 - 1) YY_MMDD_Owner's Project Number_ShopDwg_Spec Section Number
- G. As-built Documents Submittal: Submit all As-Built Documents together after Final Completion and in accordance with SECTION 017700 CLOSEOUT PROCEDURES. Allow 10 business days for initial review and for each resubmittal.

1.11 AS-BUILT PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
1. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
2. Format: Submit Product Data as annotated PDF electronic file Include As-Built Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.
- 3.

1.12 PHOTOGRAPHS

A. General: Prior to Closeout all photographic documentation required per 013220 Construction Progress Reporting shall be assembled and submitted with the Closeout Submittal Requirements.

1.13 CONSENT OF SURETY AND FINAL CERTIFICATES

A. General: Prior to closeout Consent of Surety and Final Certificates required by the Contract Documents shall be assembled and submitted with the Closeout Submittal Requirements.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Guarantee
- B. Report of Work Required by Warranty

END OF SECTION 017800

GUARANTEE

Project Title: _____

Project Location: _____

Project Number: _____ DATE: _____

GUARANTEE FOR _____ (the "Contract"),

(Specification SECTION and
Contract No.) between The County of Lake ("Owner") and_____
("Contractor").

(Name of Contractor or Subcontractor)

hereby guarantees to Owner that the portion of the Work described as follows:

which it has provided for the above referenced Project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specification SECTION _____ and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____ months after the date of the guarantee the undersigned receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize Owner to undertake such correction, repair, or replacement at the expense of the undersigned; and Contractor will pay to Owner promptly upon demand all costs and expenses incurred by Owner in connection therewith.

SUBCONTRACTOR

Signed: _____ Title: _____

Typed Name: _____

Name of Firm: _____

Contractor License Classification & Number: _____

Address: _____

Telephone Number: _____

CONTRACTOR

Signed: _____ Title: _____

Prepared by:

_____	_____	_____
(Print Name)	Signature	Date

In accordance with the terms and conditions of the Contract, the **Contractor** has agreed that, if at any time within _____ months after _____ the date of the guarantee the **Contractor** receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the **Contractor** will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

Prompt notification to be provided by the Owner Representative to the appropriate **Contractor**.

SECTION 01 82 00

DEMONSTRATION AND TRAINING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Demonstration of Equipment Operation and Instruction of Owner Personnel.

1.02 RELATED SECTIONS

- A. Section 017800 – CLOSEOUT SUBMITTALS
- B. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES

1.03 SUBMITTALS

- A. Submit preliminary schedule for Owner Representative approval, listing times and dates for demonstration of each item of equipment and each system, in writing, minimum of thirty (30) calendar days prior to activities.
- B. Submit reports and videos within (14) calendar days after completion of demonstrations and instructions. Give time and date of each training session, and hours devoted to training with a list of persons present and the corresponding video.

1.04 QUALITY ASSURANCE

- A. Equipment installed under Contract shall operate quietly and free of vibration. Adjust, repair, balance properly, or replace equipment producing objectionable noise or vibration in occupied areas of building. Provide additional brackets, bracing, etc., to prevent such noise or vibration. Systems shall operate without humming, surging or rapid cycling.
- B. Owner will provide list of personnel to receive instructions and will coordinate their attendance at agreed-upon time.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PREPARATION

- A. Verify equipment has been inspected, commissioned, and put into operation.
- B. Send approved pdf version of completed operation and maintenance manual 7 calendar days prior to training.

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

3.02 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of equipment and systems to Owner two (2) weeks prior to date of final inspection. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
- B. Use operation and maintenance manuals as basis of instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance. Display on a video screen and demonstrate the use of bookmarks and searches to find information being sought.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times, at equipment location.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

END OF SECTION 01 82 00

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DEMONSTRATION AND TRAINING

SECTION 01 91 00

COMMISSIONING

PART I - GENERAL

1.01 SUMMARY

- A. Commissioning (Cx) is the process of ensuring that all building systems are installed and perform interactively according to the design intent; those systems are efficient, cost effective and meet the Owner's Project Requirements and operational needs; that the installation is adequately documented; and that the operations staff are adequately trained. This is achieved by a full understanding of all building systems through construction, acceptance and warranty period with actual verification of performance. It also establishes testing and communication protocols in an effort to advance the building systems from installation to full dynamic operation and optimization.
- B. The Commissioning process does not relieve responsibility of the Contractor to provide a finished and fully functioning Project. The Contractor and Subcontractors provide the quality control for installation and start-up of the building systems.
- C. The specified commissioning activities shall demonstrate compliance with the Owner and California Code Commissioning requirements.
- D. Commissioning is a condition of the Contract and shall not be excluded from the base bid.
- E. Commissioning requirements extend to all alternates and change orders, as well as all subcontracts and purchase orders for work under the Contractor's control. F. Related Documents:
 - 1. Division 00 Procurement and Contracting Requirements, apply to this Section.
 - 2. Drawings and general provisions of Contract, and other Division 01 Specification Sections, apply to this Section.
 - 3. Technical Divisions of the Specifications apply to this Section.

1.02 DEFINITIONS

- A. Acceptance Phase: This is the phase of the project when the facility and its systems and equipment are inspected, tested, verified, and documented, and when most of the Functional Performance Testing (FPT) and final training occurs. This will generally occur after the Construction Phase is complete (i.e., start-up and checks have been accomplished). The Acceptance Phase typically begins with certification by the Contractor that the systems have been started in accordance with the approved protocols and the submission of the documentation of that start-up. The Acceptance Phase ends with the successful completion of all FPT and sign-off by the CA and the Owner.
- B. Action Item: Any issue that requires a response, completion, corrective or additional work, or any other action. Examples include a Request for Information (RFI), a work directive, a clarification request, a to-do item, an identified deficiency, or any other like item. Actions Items must be categorized as appropriate.

- C. Action List: This is a list that is maintained and updated by the CxA that includes all Action Items that relate to Cx activities.
- D. Commissioning (Cx): The process of ensuring that all building systems perform interactively according to the design intent and that the system operations are efficient and cost effective and meet the Owner's functional needs.
- E. Commissioning Agent (CxA): The individual retained by the Owner who will oversee the Cx process, develop and stipulate many of the Cx requirements (including FPTs), manage the Cx process, and ensure and verify that systems and equipment are installed, and tested to meet the Owner's requirements.
- F. Commissioning Coordinator (CC): The Contractor shall provide a Commissioning Coordinator. The CxA, the Owner's Representative and the CC will comprise a commissioning management team. While the CxA leads the overall commissioning process, the CC is responsible for managing contractors in their day-to-day performance of the specified commissioning work. The CC is an employee of the Contractor who is regularly and frequently on site. Qualifications for the Commissioning Coordinator include experience and excellent abilities to schedule, coordinate and manage subcontractors. The following tasks are some of the critical items included in the CC's scope of work:
 - 1. Integrating the specified commissioning activities into the overall contract construction schedule, updating the schedule and providing three-week lookahead schedules showing the upcoming commissioning related activities.
 - 2. Providing all commissioning submittals to the Owner's Representative and CxA.
 - a. O&M Manuals per Division 017700 Close-out Procedures and 017800 Close-out Submittals
 - 3. Coordinating Owner training and ensuring that training is provided in accordance with the Division 017700 Close-out Procedures and the technical specifications.
 - 4. Ensuring that subcontractor and supplier review and complete the CxA provided FPT procedures and forms then submitted in accordance with the specifications. This includes providing written comments (even if no exception is taken) regarding issues pertaining to safety, equipment protection/warranty and appropriateness of the procedure for the systems as provided from all required FPT participants for each FPT.
 - 5. Coordinating development and submittal of specified flushing, cleaning and startup procedures and ensuring that these procedures are completed, and documentation is submitted.
 - a. Providing test reports and progress reports in accordance with the 017800 Close-out Submittals, commissioning, and technical specifications.
 - 6. Managing the Contractor participation in the FTP process in accordance with the commissioning specifications.
 - 7. Managing the Contractor participation in resolution of issues identified during pre-commissioning meetings and during the commissioning process.
 - 8. Ensuring that subcontractors perform preliminary testing to verify readiness for final FPT demonstrations, submitting documented verification that systems will pass functional tests

with acceptable results as documented in the FPTs and coordinating the demonstration of the FPTs to the Owner and the CxA.

9. Coordinating repeat FPTs that fail due to contract deficiencies until acceptable results are achieved and managing the reimbursement of the Owner's costs for repeated tests in accordance with the commissioning specifications.
- G. Commissioning Plan: This is a detailed document prepared and maintained by the CxA that describes the entire commissioning process.
 - H. Commissioning Specifications (Cx specs): Includes the Cx specification section and Cx-related subsections of other specifications. All Contractor requirements relating to Cx.
 - I. Commissioning Team: The parties involved in the commissioning process for any given system. The Cx Team will include a core group involved with all systems. This core group will typically include the CxA, the Owner's Cx coordinator, and Contractor CC and/or MEP Coordinator. At any given point the team may include the project manager, members of the design team, the project inspector, product representatives, and operation and maintenance personnel.
 - J. Contractor: As used herein, Contractor is a general reference to the installing parties and can therefore refer to the Contractor, the subcontractors, or vendors as inferred by its usage.
 - K. Construction Phase: Phase of the project during which the facility is constructed and/or systems and equipment are installed and started. Contractor and subcontractors complete the installation complete start-up documentation, submit O&M information, establish trends, and perform other applicable requirements to get the systems started. The Construction Phase will generally end upon completed start-up and TAB of systems and equipment.
 - L. Contract Documents: The documents governing the responsibilities and relationships between the parties involved in the construction of the project including, but not necessarily limited to, the agreement/contract, construction plans and drawings, specifications, addenda, and change orders.
 - M. Deficiency: A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents.
 - N. Functional Completion: A milestone that marks the completion of the Acceptance Phase and successful documentation of the FPTs by the CxA.
 - O. Functional Performance Testing (FPT): This process verifies that the systems within the commissioning scope function in accordance with the Contract Documents, the Owner's design intent and the Design Team's Basis of Design. The process includes the documented testing of the systems under actual and simulated operating conditions. Functional Performance Test (FTP) procedures are detailed instructions that allow experienced system technicians to perform the FPTs with repeatable results. The repeatability of the procedures and results validate the tests. Final performance testing of systems will begin only after the Contractor certifies that such systems are completely installed and ready for functional testing and after the CxA has completed the subsequent installation verification process for the systems to be tested.
 - P. Installation Verification Process: This process includes the on-site review of related system components for conformance to the Contract Documents. Upon receipt of the completed Contractor's System Readiness Manual, the CxA will conduct this review and verify system readiness for final functional testing procedures. The CxA will document issues identified during this process and assign them to the appropriate party for resolution.

- Q. MEP Coordinator: Contractor's staff member who is responsible for all MEP equipment and system installation, coordination, and start-up is the primary contact for the Cx Agent and shall be responsible to organize and lead the start-up and commissioning meetings, tracks response to Action Items from Cx Agent and generate minutes.
- R. Ready to Commission statement: The subcontractor's written statement, through the System Readiness Checklist (SRC), that the equipment or system described has been completely installed, started, and tested to ensure that it has met all the requirements of the contract documents and is ready for commissioning.
- S. Start-up: Refers to the quality control process whereby the Contractor verifies the proper installation of a device or piece of equipment, executes the manufacturer's starting procedures, completes the start-up checklists, energizes the device, verifies it is in proper working order and ready for dynamic testing, and completes the start-up tests.
- T. System Readiness Checklists (SRCs): These checklists are provided by the CxA and include equipment installation and start-up items specified to be performed and verified by the Contractor. These checklists shall be compiled along with associated start-up forms by the Contractor to create the Contractor's System Readiness Plan. They shall be completed during installation and returned to the CxA as components of the Contractor's System Readiness Manual prior to the final CxA installation verification and functional performance testing process.
- U. System Readiness Manual: This document includes, for each system within the commissioning scope of work, completed and signed versions of each form submitted by the Contractor's.
- V. System Readiness Plan: This document shall be completed by the Contractor and submitted to the CxA prior to the final installation verification and functional performance testing process. By submitting these completed forms, the Contractor signals that the relevant systems are installed, operational and will meet functional testing acceptance criteria. The System Readiness Plan is compiled by the Contractor and includes, for each system within the commissioning scope of work, the System Readiness Checklists provided by the CxA, followed by the associated Contractor's Start-up and Test Forms. The Contractor System Readiness Plan shall be submitted to the CxA for review and approval prior to installation of the systems.

1.03 REFERENCES

- A. American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE):
 - 1. ASHRAE Guideline 0-2013, The Commissioning Process
 - 2. ASHRAE Guideline 1.1-2007, HVAC&R Technical Requirements for The Commissioning Process.
 - 3. ASHRAE Standard 202-2013, Commissioning Process for Buildings and Systems
- B. US Green Building Counsel (USGBC), Leadership in Energy and Engineering Design (LEED):
 - 1. Reference Guide for the version of LEED pursued by project.
- C. California Building Standards Code (California Code of Regulations, Title 24):
 - 1. Part 6, Building Energy Efficiency Standards for Residential and Nonresidential Buildings

2. Part 11, CALGreen

1.04 SYSTEMS TO BE COMMISSIONED

- A. All systems and equipment identified in the contract documents as having quality assurance or acceptance testing requirements are included in SYSTEMS TO BE COMMISSIONED by reference.
- B. All systems and equipment identified in the contract documents as requiring startup are included in SYSTEMS TO BE COMMISSIONED by reference.
- C. All systems and equipment identified in the contract documents requiring training are included in SYSTEMS TO BE COMMISSIONED by reference. D. Commissioning shall be system based.
 - 1. Equipment and sub-assemblies are to be installed, started, and tested as components of each respective system rather than as a category of equipment or by specification section.
- E. The systems to be commissioned shall include but are not limited to the following:
 - 1. Air Handling Units
 - 2. Exhaust Fans
 - 3. HTHW Heat Exchangers
 - 4. Pumps
 - 5. Fan Coils
 - 6. Terminal Devices (VAV boxes)
 - 7. Sump Pumps
 - 8. Air Transfer Fans
 - 9. Hot Water Heaters
 - 10. Building Control System - Direct Digital Control System
 - 11. Energy Management System
 - 12. Hydronic Systems
 - 13. Heat Exchangers
 - 14. Automated Lighting control systems
 - 15. Emergency generators
 - 16. Transfer switches
 - 17. Utility Meters and sub-metering system

18. VFDs
19. Power to Mechanical Systems
20. Lighting Inverter
21. Irrigation Systems
22. Solar Photovoltaic Power Systems
23. Domestic Hot Water Systems
24. VRF Systems
25. Radiant Heaters
26. Heat Recovery boxes
27. Irrigation systems
28. Renewable Energy Systems
29. Fire alarm / Fire Detection System.
30. Data Systems.
31. Audio/Visual Systems.
32. Intercom / Telecom Systems.
33. Miscellaneous Low Voltage Systems.
34. Other Systems as Specified.

1.05 CONSTRUCTION AND ACCEPTANCE PHASE COMMISSIONING

- A. The Contractor will be an active participant in the construction and acceptance phase commissioning activities. The commissioning tasks and responsibilities include following:
 1. Respond to requests from the CxA for interpretation/clarification of equipment selection and sequence of operation during functional performance test development.
 2. Review, and provide direction as necessary on, the functional performance tests developed by the CxA for conformance with the design intent, within an agreed time interval.
 3. Supporting the commissioning process by diligently executing the contract requirements to provide a fully functional facility ready for testing and working closely with the commissioning team to integrate the commissioning process into the project delivery schedule.
 4. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.

5. Cooperate with the CxA for resolution of issues recorded during the commissioning process.
6. Schedule and attend commissioning kick-off meeting and commissioning coordination meetings.
7. Integrate and coordinate commissioning process activities with construction schedule.
8. Develop quality assurance process to verify and document proper installation, access, startup, adjusting, check out and maintenance of commissioned systems.
9. The CxA will develop the System Readiness Checklist (SRC) forms for each system within the commissioning scope of work. These forms summarize specific aspects of the installation of each system that the Contractor must verify prior to conducting functional performance testing. The SRC forms will be submitted to the Contractor and subcontractors for review and comments and subsequently compiled into the System Readiness Plan.

As part of the commissioning submittals, the Contractor shall submit a System Readiness Plan to the CxA. This document is typically a binder organized into sections with one section per system, each of which includes the SRC for that system followed by Manufacturer – or installation subcontractor-provided installation checklists, detailed start-up procedures, blank TAB forms and other project specific test forms. The CxA will review the System Readiness Plan and document any missing or erroneous forms. After the Contractor provides the correct forms, the CxA will provide final approval and acceptance of the System Readiness Plan for use by the Contractor and/or installation subcontractors. Once approved, the System Readiness Plan is subsequently referred to as the System Readiness Manual.

10. Review and accept commissioning functional performance test procedures provided by the CxA.
11. Ensure cooperation and participation of specialty subcontractors.
12. Provide to CxA a completed Functional Verification Checklist certifying that for all (listed) systems and equipment to be commissioned, that all systems, subsystems, equipment, and controls are ready for testing.
13. Ensure participation of major equipment manufacturers in appropriate training and testing activities.
14. Execution of the Functional Performance Test protocols for CxA to witness.
15. Manage every aspect of the training program including being responsible for all training requirements. An outline of the training requirements shall be developed with the Owner and CxA.
16. Responsible for developing and implementing a formal equipment maintenance program to ensure that all equipment specified to be installed on the project is received and maintained in good working order until accepted by the Owner.

1.06 SUBMITTALS

- A. The Contractor shall provide the CxA a list of required equipment/system submittals to the CxA. The CxA will identify submittals to be submitted to the CxA concurrent with submission to the Owner's Representative for review.
- B. The Contractor shall provide the CxA the requested submittals for the CxA concurrent review, with submission to the Owner for review
- C. One set of searchable and bookmarked electronic file of coordination drawings which includes all commissioned systems e.g., mechanical, electrical, fire protection, plumbing, and telecom.
- D. Names of Contractor and subcontractor's personnel who will be responsible for the startup and commissioning of the facility. To include names, email, and telephone contact information.
- E. Start-up and commissioning schedule. To include detailed plan of the sequence of construction with start and completion dates for each phase.
- F. Start-up forms for equipment and systems installed in the building. Documents to be used by sub-contractors to ensure that the building complies with the requirements of the contract documents.
- G. All Subs, through the Contractor, shall submit required installation, start-up, and preventive maintenance equipment data sheets to the CxA within 45 calendar days of equipment acceptance by the Owner.
- H. All Subs, through the Contractor, shall submit initial O&M data for system and equipment being commissioned under this specification. Initial O&M data shall be submitted within 45 calendar days of equipment acceptance by the Owner, but no less than 8 weeks prior to the beginning of functional testing.
- I. The Contractor shall submit an electronic copy of the construction meeting minutes, updated construction schedule, RFI log, and Bulletin log to the CxA within seven (7) calendar days of each meeting or update.
- J. Contractor shall submit an electronic copy of training plan and training materials to the CxA for review and approval prior to providing training.
- K. Consolidated close out list with all training, Final O&M manuals, As-Built documentation and surplus stock listed by spec section. Information to be compiled from the specifications.

PART II - PRODUCTS

2.01 TEST EQUIPMENT

- A. The Contractor shall supply all personnel and equipment for the demonstration and testing, including, but not limited to, tools, instruments, ladders, lifts, computers, software, cables, etc. Contractor supplied personnel must be competent with and knowledgeable of all project-specific systems, and automation hardware and software. All training documentation, O&Ms, and submittals shall be at the job site before functional testing commences.
- B. All standard testing equipment required to perform startup and initial checkout and required functional performance testing shall be provided by the division contractor for the equipment being

tested. For example, the mechanical contractor of Division 23 shall ultimately be responsible for all standard testing equipment for the HVAC system and control systems in Division 23.

- C. Special equipment, tools and instruments (only available from vendor/Subs, specific to a piece of equipment) required for testing equipment, according to these Contract Documents shall be provided by the Contractor and left on site, for the CxA to use during functional testing, seasonal testing, and deferred testing. The equipment, tools, and instruments will be returned to the vendor/Subs after successful conclusion of the commissioning effort.
- D. The controls contractor shall provide the CxA with temporary software license to be loaded on the CxA's computer, and any necessary network connection cables, for accessing the direct digital control system field panels for system testing. The controls contractor shall also provide a palm device (if applicable) with attachments, software, and cables, to check setpoint values of terminal device controllers. The controls contractor shall provide the CxA with log on ID, password, and LAN IP connection criteria for remote connection to direct digital control system. All the software, cables, and modems provided to the CxA will be returned at the successful conclusion of the commissioning effort.
- E. All testing equipment used by the contractors shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Contract Document Specifications (Project Manual). If not otherwise noted, the following minimum requirements apply to test and measurement equipment: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.1°F and a resolution of $+ \text{ or } - 0.1^{\circ}\text{F}$. Pressure sensors shall have an accuracy of $+ \text{ or } - 2.0\%$ of the value range being measured (not full range of meter) and have been calibrated within the last year. All equipment shall be calibrated according to the manufacturer's recommended intervals. Calibration tags shall be affixed or certificates readily available.

PART III - EXECUTION

3.01 AFTER AWARD OF CONTRACT

- A. The Contractor shall identify the person on their staff who will serve as the Commissioning Coordinator (CC). This person shall be responsible for all startup and commissioning issues on the project. Specific duties are identified in Part 1 of this Section.
- B. Within the first 30 calendar days of the project the Contractor shall meet with the Owner and the commissioning agent to discuss the process to be used on the project for managing communication to and from the Cx agent. This is to include the means for communication issues, commissioning reviews, processing submittals, RFIs, change orders, etc., meeting minutes, schedule information, Cx agent observations, and the action item lists. If a mutually agreeable process cannot be agreed upon, the Cx agent's process and software tools will be utilized.
- C. Within the first 60 days of the project there will be a meeting of the GC, the Cx agent and the key subcontractor's personnel to review how the Cx process will be implemented on the project and how the communication and documentation requirements will be met. The subcontractors are expected to send the staff that will be participating in the start-up and commissioning meetings.
- D. The Contractor will submit a schedule listing the key startup and Cx activities. The initial schedule can be general in nature. As the project progresses, the details on the schedule must be sufficient to list the activities of each Contractor for each phase of the project and what work must be accomplished before each listed task.

- E. The Contractor is to identify the team members from each subcontractor who will be participating in the start-up and commissioning meetings. This list is to include the name and contact information for the subcontractor's commissioning coordinator.
- F. The Contractor is to compile a listing of all factory tests that will take place prior to the start of the start-up and commissioning meetings. The consolidated list, along with an approximation of when they are expected to take place, shall be forwarded to the Cx agent.

3.02 Cx MEETINGS

- A. Eight weeks prior to supplying potable water to the building or the permanent power, the Commissioning Coordinator (CC) will schedule the first start-up and commissioning meeting. The meetings will not be concurrent with the Contractor's MEP coordination meeting and are to be scheduled at a mutually agreeable time between the Contractor, the Cx agent, and the Owner.
- B. The meetings will initially be held every second or third week as appropriate, and then increase in frequency to weekly as the bulk of the start-up and commissioning work is taking place.
- C. During each meeting an updated start-up and commissioning schedule will be distributed. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- D. During the meetings a consolidated training, O&M, and attic stock list drawn from the contract document requirements will be distributed. Decisions on the O&M review, when the training will take place, and how the stock will be turned over the Owner will be made based on this document. In addition to the hard copies distributed at the meeting, an electronic version shall be forwarded to the Cx agent and the Owner.
- E. Minutes of the start-up and commissioning meetings will be generated and distributed by the Commissioning Coordinator (CC). The minutes are to incorporate findings from the Cx agent. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- F. The updated FPTs will be provided to the Contractor by the Cx agent.
- G. The Contractor and the subcontractors will be required to coordinate their activities, and work collaboratively, with the test and balance contractor hired by the Owner.
- H. The Contractor will coordinate the schedules for two review meetings to be led by the Cx agent. The first will be a comprehensive test and balance review and needs to include the mechanical subcontractor's wet and dry side foreman. The second meeting will be a controls review. This meeting is to be attended by the controls subcontractor's lead on the project and the programmer. Each meeting is to last at least two hours.

3.03 FIELD START-UP AND TESTING

- A. The dates for all field start-up activities shall be listed on the start-up and commissioning schedule.

- B. The CxA works with the Subs in developing startup plans and startup documentation formats, including providing the Subs with pre-functional checklists to be completed, during the startup process.
- C. The TAB contractor submits their TAB plan, along with the TAB Plan Review Checklist, for approval by the CxA prior to starting TAB work.
- D. In general, the checkout and performance verification proceeds from simple to complex, from component level to equipment to systems and intersystem levels with pre-functional checklists being completed before functional testing.
- E. The CxA shall review shop drawings and material certifications, review of reports from independent testing agencies, independent on-site periodic construction observation and attendance of selected quality control-related meetings (e. g., Pre-installation Conferences).
- F. Pre-Functional Test Phase:
 - 1. The Contractor shall prepare the equipment and systems for start-up in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. Start-up shall be performed by the Contractor's and/or manufacturer's start-up technicians in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. The Contractor shall test the systems to verify that they perform in accordance with the Contract Documents, including the commissioning FPT procedures.
 - 2. The CxA will witness equipment start up and testing. The Contractor shall notify the CxA in writing at least fourteen (14) calendar days in advance of the start-up and testing dates so that the CxA can schedule attendance. If the CxA is not notified in advance of a scheduled start-up or testing activity, the start-up or testing shall be rescheduled and repeated to the satisfaction of the CxA. When scheduled start-up activities are not executed because of lack of preparation or coordination by the Contractor, the Contractor will be subject to back-charges in accordance with the Contract Documents.
 - 3. The Contractor shall complete and compile all start-up forms, test forms and SRCs for the System Readiness Manual and submit to the CxA.
 - 4. Upon receipt of the completed System Readiness Manual forms, the CxA will perform an Installation Verification by providing various inspections and backchecks of the completed System Readiness Manual forms. Issues notes during this process will be documented by the CxA in the Commissioning Issues Log.
 - 5. Upon acceptance of the System Readiness Manual, which includes the draft TAB report, functional performance testing shall be scheduled. Functional performance testing shall not commence until all critical issues identified during the Installation Verification process are resolved.
- G. Upon completion of the start-up and contractually required work, the Contractor shall submit a 'Ready to Commission' document to the Owner for the Specific Equipment and/or system that is complete. It is only after this document is received that the FPTs will commence.

3.04 Functional Performance Testing:

- A. Functional Performance Testing of commissioned systems shall begin after all critical issues discovered during the installation verification process have been corrected.
- B. The procedure for developing and performing the FPTs shall be as follows:
 - 1. The Contractor shall provide the equipment and commissioning submittals as specified in the Contract Documents.
 - 2. The Commissioning Authority will draft the FPT procedures based on the Contractor's submittals as approved by the Design Team. The draft procedures will be submitted to the Commissioning Team for review.
 - 3. Each Contractor and equipment supplier that is specified as an FPT participant in the FPT Summary Tables in the specifications shall participate in the development and performance of the associated FPTs. Each FPT participant shall provide written comments on the associated FPT procedures regarding each of the following issues:
 - a. Verify that the procedures can be performed without compromising the safety of the participants.
 - b. Verify that the procedures can be performed without compromising the warranties of equipment, components, and systems.
 - c. Verify that the procedures are appropriate for the equipment, components and systems as provided.
 - 4. The CxA will complete the working drafts of the FPT procedures.
 - 5. Subcontractors and suppliers shall provide the personnel, expertise and test equipment to operate and maintain the systems during testing.
 - 6. The Contractor shall test all systems within the commissioning scope of work, using the FPT procedures until the acceptable results specified in the FPT procedure are verified and documented. If necessary to obtain acceptable results, the Contractor may consult with the CxA to acquire clarification and resolve issues. The CxA will be available for on-site assistance of this nature.
 - 7. The Contractor shall submit documentation that verifies that the acceptable results specified in the FPT procedures have been verified and that they are ready to demonstrate the FPTs with acceptable results. Acceptable documentation consists of completed FPT record forms which document acceptable FPT results or indication on the Systems Readiness Checklists that the Contractor's pre-functional testing has verified that functional performance testing of the equipment and associated system demonstrate the acceptable results as specified.
 - 8. After the CxA has accepted the Contractor's documentation of acceptable results, the FPT shall be conducted and demonstrated to the CxA. If acceptable results are not demonstrated for an FPT, the Contractor shall resolve the issue(s) and the demonstration shall be repeated.
 - 9. The Contractor shall verify and document acceptable FPT results for all equipment components and systems. The FPTs may be demonstrated for a sample of the systems that

comply with all of the following criteria. This process is referred to in this document as "demonstration sampling".

- a. There shall be many of the systems with similar components that have identical sequences of operation which are implemented using identical control software programming.
 - b. The components and systems to be included in the Demonstration Samples will be chosen by the CxA at the time of demonstration.
 - c. The sample size will be in accordance with the Functional Performance Test (FPT) Demonstration Sampling Tables in the specifications.
 - d. Acceptable results must be demonstrated for the entire sample. If the FPT results are not acceptable due to a lack of preparation or coordination by the Contractor for any system or component sampled, the FPT shall be demonstrated for all the systems and components for which it was written. Whenever the demonstrated results are not acceptable, the Contractor shall make corrections and the FPT shall be demonstrated again. The cost of back-checking FPTs with unacceptable results is not included in the Commissioning Authority's scope of work. Back-charging applies to additional back-checking required due to lack of preparation by Contractor.
10. The CC is responsible for scheduling and coordinating functional testing activities. The Contractor shall demonstrate the FPTs after they have verified that performing the FPTs will yield the documented acceptable results. The Contractor is subject to back-charging, as specified herein, if acceptable results are not demonstrated because of work that should have been verified during predemonstration testing prior to the submittal of the System Readiness Manual. Acceptable results must be obtained during a single demonstration. No more than two delays of less than 15 minutes each are acceptable for each test.
- a. In addition to conducting the functional tests developed by the CxA, the Contractor shall be required to complete all start-up and testing procedures as specified elsewhere in the Contract Documents.
 - b. Where the CxA requires BMS trending, the CxA will provide a points list within the FPT form that may include both hardware (input/output) and software (virtual) points and appropriate trending intervals.
11. The Contractor shall provide trend data to the CxA in electronic format. As a Owner approved alternative, the Contractor can provide the CxA remote access to the BMS and provide training that will allow the CxA to directly download trend data.
12. The CxA will analyze and review the trend data and associated system performance.

3.05 Cx AGENT Functional Performance Testing (FPT)

- A. Upon receipt of the Ready to Cx statement, the Cx Agent will coordinate a time with the Contractor to witness the FPTs.

- B. The CxA develops specific equipment and system functional performance test procedures. The Contractor and manufacturer review the procedures to make sure the tests are safe for the equipment provided.
- C. The functional test procedures are executed by the Contractors, under the direction of, and documented by the CxA.
- D. The CxA will direct a TAB verification, with support from the TAB Contractor, to verify the values reported in the final TAB report.
- E. Items of non-compliance in material, installation or setup are corrected at the Sub's expense and the system retested.
- F. All deficiencies noted will be tracked via the CxA issues log. The Contractor will be responsible for obtaining sign-off of corrected items.
 - 1. The Contractor is responsible for scheduling and coordinating commissioning activities. The Contractor shall reimburse the Owner for the cost of commissioning activities that must be repeated because of a lack of preparation or coordination by the Contractor. Reimbursable costs include CxA fees for services billed at the CxA's standard hourly rate. Activities subject to backcharging include: Repeated back-checking: Commissioning issues are documented in the Commissioning Issues Log. The Contractor shall submit a brief written statement describing when and how each issue has been resolved, which shall be added to the Issues Log maintained by the CxA. The CxA will back-check these issues on a one-time-per-issue basis to verify they have been resolved. If the back-checked issues that have not been resolved as reported, the associated cost of the unsuccessful back-check shall be subject to backcharging.
 - 2. Repeated installation verification: Once the Contractor has submitted the completed System Readiness Manual forms, the CxA will perform final installation verifications on selected systems. Discrepancies discovered will be reported in the Commissioning Issues Log. Back-checking the correction of these discrepancies shall be subject to back-charging.
 - 3. Repeated witnessing of FPT demonstrations: As specified in this section, the Contractor demonstrates the functional performance tests after they have verified that performing the FPTs will yield the documented acceptable results. The cost of witnessing demonstrations that do not demonstrate specified acceptance criteria shall be subject to back-charging.

3.06 SAMPLING

- A. As noted in the specifications, multiple identical pieces of non-life-safety or otherwise non-critical equipment will be functionally tested using a sampling strategy. Significant application differences and significant sequence of operation differences in otherwise identical equipment invalidates their common identity. A small size or capacity difference, alone, does not constitute a difference. It is noted that no sampling by Subs is allowed in pre-functional checklist execution.
- B. Sampling strategy referenced in the Specifications as the "xx% Sampling—yy% Failure Rule" is defined by the following example:
 - 1. xx = the percent of the group of identical equipment to be included in each sample.

2. yy = the percent of the sample that if failing, will require another sample to be tested.

C. The example below describes a 20% Sampling—10% Failure Rule.

1. Randomly test at least 20% (xx) of each group of identical equipment. In no case test less than three units in each group. This 20%, or three, constitute the “first sample.” If 10% (yy) of the units in the first sample fail the functional performance tests, test another 20% of the group (the second sample).
2. If 10% of the units in the second sample fail, test all remaining units in the whole group. If at any point, frequent failures are occurring, and testing is becoming more troubleshooting than verification, the CxA may stop the testing and require the responsible Sub to perform and document a checkout of the remaining units, prior to continuing with functionally testing the remaining units.

3.07 FAILURE DUE TO MANUFACTURER DEFECT:

A. If 10%, or three, whichever is greater, of identical pieces (size alone does not constitute a difference) of equipment fail to perform to the Contract Documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the Contractor, the Owner, the A/E, or the CxA. In such case, the Contractor shall provide the Owner with the following:

1. Within one week of notification Contractor or manufacturer's representative shall examine all other identical units making a record of the findings. The findings shall be provided to the Owner within two weeks of the original notice.
2. Within two weeks of the original notification, the Contractor or manufacturer shall provide a signed and dated, written explanation of the problem, cause of failures, etc. and all proposed solutions which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation. The Owner will determine whether a replacement of all identical units or a repair is acceptable.
3. Two examples of the proposed solution will be installed by the Contractor and the PM will be allowed to test the installations for up to one week, upon which the Owner will decide whether to accept the solution. Upon acceptance, the Contractor and/or manufacturer shall replace or repair all identical items, at their expense and extend the warranty accordingly, if the original equipment warranty had begun. The replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

3.08 DEFERRED TESTING

A. Unforeseen Deferred Tests: If any check or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of checklists and functional testing may be delayed upon approval of the Owner, A/E, and CxA. These tests will be conducted in the same manner as the seasonal tests as soon as possible.

- B. Seasonal Testing: During the warranty period, seasonal testing shall be completed as part of this contract. Seasonal testing is intended to test the performance of systems under full load conditions that cannot be simulated during the functional testing period. For example, it is impossible to test the heating system under full load conditions in July, so the heating system would be full load tested during the winter months. The CxA shall coordinate this activity. Tests will be executed, documented, and deficiencies corrected by the appropriate Subs, with facilities staff and the CxA witnessing. Any final adjustments to the O&M manuals and As-Builts due to the testing will be made by the Contractor.

3.09 TRAINING OF OWNER PERSONNEL

- A. The Contractor shall be responsible for training coordination and scheduling and ultimately for ensuring that training is complete. The CxA will be responsible for overseeing and approving the adequacy of the training of Owner personnel for commissioned equipment.
1. Instructor capabilities shall be commensurate with level of instruction required. Instructor qualifications shall be submitted to Owner and CxA for review prior to training.
 2. The specific training requirements of Owner personnel by Subs and vendors as directed within the specifications.
 3. Each Sub and vendor responsible for training shall submit a written training plan to the CxA for review and approval prior to training. The plan shall include the following elements:
 - a. Equipment (included in training)
 - b. Intended audience
 - c. Location of training
 - d. Objectives
 - e. Subjects covered (description, duration of discussion, special methods, etc.)
 - f. Duration of training on each subject
 - g. Instructor name and qualifications for each subject
 - h. Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
 4. The CxA develops criteria for determining that the training was satisfactorily completed, including attending some of the training, etc. The CxA recommends approval of the training to the Owner.

3.10 COMMISSIONING ISSUES LOG:

- A. Issues identified during the commissioning process, including during site observations, pre-functional testing verification and functional testing, will be logged in the commissioning issues log. The CxA will maintain the master log. For each issue, the CxA will make a recommendation regarding who they believe is in the best position to provide the resolution. However, it is the Contractor's responsibility to manage issue resolution, including the determination of how the issue will be resolved and who will do the work.
- B. Each issue on the list will be classified with a "status" of either "resolved", "unresolved", or "resolved-unverified". "Resolved" issues are closed, having either been addressed by the Contractor and verified as corrected by the CxA or having been accepted by the Owner. "Resolved-unverified" issues have been reported as resolved by the Contractor but are not yet verified by the CxA as resolved. "Unresolved" issues have not been reported as addressed by the Contractor. Updated unresolved issues lists will be distributed to team in MS Word/Excel format.
- C. Material and method issues discovered during commissioning, but that pertain to Contractor construction shall be promptly reported to the A/E, CxA and the Owner's Representative.
- D. When a commissioning issue is resolved, the Contractor shall submit an updated list with a written response describing when and how the issue is resolved. The CxA or an applicable member of the Design Team shall then back-check the resolution of said issue. The CxA scope of work includes one back-check of issues that the Contractor reports as resolved. Back-charging applies to back-checking required due to lack of preparation of Contractor.

3.11 OPERATION AND MAINTENANCE MANUALS:

- A. The specific content and format requirements for the standard O&M manuals are detailed in Section 017800 Closeout Submittals. Special requirements for TAB contractor in appropriate Division 23 Sections and for the Controls contractor are found in appropriate Division 23 Sections. Electrical requirements are located in the appropriate Division 26 Sections. Refer to the specifications for additional O&M requirements.
 - 1. System Narrative. The Contractor shall include in the beginning of the O&M manuals a separate section describing the systems including:
 - a. A system narrative describing the type and function of the system.
 - b. Site information, including facility description and current requirements.
 - c. Simplified professionally drawn single line system diagrams on 8 ½" x 11" or 11" x 17" sheets. These shall include chilled water distribution system, water system, condenser water system, heating system, supply air systems, and exhaust systems and others as designated. These shall show major pieces of equipment such as pumps, heat exchangers, humidifiers, control valves, expansion tanks, coils, service valves, etc.
- B. CxA Review and Approval. Prior to material completion, the CxA shall review the O&M manuals, documentation and redline As-Built for systems that were commissioned and list other systems documentation that the CxA should review to verify compliance with the Specifications. The CxA will communicate deficiencies in the manuals to the Owner or A/E, as requested. Upon a successful review of the corrections, the CxA recommends approval and acceptance of these sections of the O&M manuals to the Owner or A/E. The CxA also reviews each equipment warranty and verifies

that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

3.12 CLOSE-OUT PROCESS

- A. All start-up documentation generated by the subcontractors shall be submitted to the Cx agent and the Owner in an electronic format.
- B. The sign-in sheets for all training sessions shall be submitted to the Cx agent and the Owner in electronic format.
- C. All training activities will be scheduled at mutually agreeable times between the Contractor, the Owner, and the Cx agent.

END OF SECTION 01 91 00

44. NO WAIVER OF RIGHTS

44.1 Neither the inspection by the Owner, through the Engineer or any of his employees, nor any order by the OWNER for payment of money, nor any payment for, or acceptance of, the whole or any part of the Work by the Owner or Engineer, nor any extension of time, nor any possession taken by the Owner or its employees, shall operate as a waiver of any provision of this Contract, or any power herein reserved to the Owner, or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

45. ACCESS BY STATE AND LOCAL GOVERNMENT OFFICIALS

45.1 During construction, Contractor shall supervise, inspect and direct work competently and efficiently, devoting such attention thereto and applying such personal skills and expertise as may be required and necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.

45.2 Owner shall at their option, provide an Inspector and assistant Inspectors, if necessary, who shall act under the direction of the Engineer and the Owner as prescribed by law. Contractor in no way is relieved of any responsibility by the activities of Inspector.

45.3 Work shall be performed under the general observation and administration of Engineer. Contractor shall immediately comply with orders and instructions given in accordance with terms of Contract by Engineer, or by any authorized assistant, inspector or other representative of Engineer acting within scope of duties entrusted, but nothing herein contained shall be taken to relieve Contractor of obligations or liabilities under Contract.

45.3.1 Engineer will provide administration of Contract and observation of the Work as hereinafter described.

45.3.2 Engineer will have authority to act on behalf of Owner only to extent provided in Contract Documents.

45.3.3 Engineer will visit site at intervals as agreed in the Owner / Engineer agreement. However, Engineer will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of Work. On basis of on-site observations, Engineer will keep Owner informed of progress of Work, and will endeavor to guard Owner against defects and deficiencies in Work of Contractor.

45.3.4 Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work.

45.3.5 Engineer will not be responsible for or have control or change over acts or omissions of Contractor, subcontractors, or any of their agents or employees, or any other persons performing Work.

45.3.6 Engineer will review Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with design concept of Work and with information given in Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay.

45.3.7 Engineer will conduct inspections to recommend dates of Substantial Completions and Final Acceptance, will receive and forward to Owner for their review, written warranties and related documents required by Contract and assembled by Contractor.

45.3.8 Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings and Specifications or otherwise) as Engineer may determine necessary, which shall be consistent with the intent of and reasonable inferable from the Contract Documents. Such written clarifications and interpretations will be binding on the Contractor, unless Owner in its discretion directs otherwise. If Contractor believes that a written clarification or interpretation justifies an adjustment in the Contract Sum or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, the Contractor may make a written claim therefore as provided herein.

45.3.9 Based on the observations, Engineer may disapprove or reject Work which Engineer believes to be defective, or that Engineer believes will not produce a complete Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer with consent of Owner, will also have authority to require special inspection or testing of Work, whether or not the work is fabricated, installed or completed.

46. FIRE PREVENTION AND PROTECTION

46.1 The Contractor shall perform all Work in a fire-safe manner. He shall supply and maintain, on the site, adequate fire fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable Federal, local and State fire prevention regulations and where the regulations do not cover, with applicable parts of the National Fire Prevention Standard for "Safeguarding Building Construction Operations", (NFPA No. 241).

47. STORAGE AND PROTECTION OF MATERIALS

47.1 Materials shall be so stored as to ensure the preservation of their quality and fitness for the Work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and they shall be placed under cover. Stored materials shall be located so as to facilitate prompt

inspection. Private property shall not be used for storage purposes without the written permission of the Owner or lessee.

- 47.2 Electrical equipment, devices, and motors shall be placed in dry and warm storage as approved by the Engineer.
- 47.3 All equipment and materials which are not to be painted (such as aluminum and stainless steel) and all factory finished or coated equipment and materials which are not to be painted, that are installed prior to completion of adjacent work, shall be completely covered and protected.

48. FINAL INSPECTION

- 48.1 Upon completion of all the Work under this Contract, and before the request for final payment is made, Contractor shall notify the Engineer in writing, and request a Final Inspection of the Work. This request shall include Contractor's certification that the Contract Documents have been reviewed, that the Project has been inspected for compliance and completed in accordance with the Contract Documents, that Work has been tested and is operational and the Project is completed, and ready for final inspection. The Contractor shall provide to the Engineer copies of Contractor's pre-final Inspection list of items that the Contractor completed prior to requesting the Final Inspection.

When the Work is deemed acceptable under the Contract Documents and the Contract fully performed, the Engineer will promptly record a Notice of Completion. Thirty-Five (35) days after the filing of said Notice of Completion the Engineer shall issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The final Certificate for Payment signed by the Engineer will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment have been fulfilled.

- 48.2 Upon completion of Final Inspection, the Engineer shall transmit in writing to the Contractor a list of items to be completed or corrected before the request for Final payment is made. This list shall be prepared by the Managing Engineer and may be in addition to any list previously prepared or cover any previous work reviewed by the Resident Engineer or Inspectors.
- 48.3 Warranties required by the Contract Documents shall commence on the date of recording of the Notice of Completion in the event that a Certificate of Substantial Completion has not been issued.

49. POSTING OF WAGE RATES

- 49.1 Attention is directed to Section 1735 of the Labor Code of the State of California. No discrimination shall be made in the employment of persons upon public works because of race, color, religion, ancestry, sex, or national origin. Every Contractor and Subcontractor for public works violating this Section is subject to all penalties imposed thereof.
- 49.2 APPRENTICES:
- 49.2.1 The Contractor and all subcontractors shall comply with the provision of Section 1777.5 of the California Labor Code regarding employment of apprentices and contributions of apprenticeship program.
- 49.3 WAGE RATES:
- 49.3.1 Pursuant to the provisions of Articles 1 and 2 of Chapter 1, Part 7, Division 2 of the Labor Code of the State of California, not less than the general prevailing rate of per diem wages for holiday and overtime work for each craft classification or type of worker needed to execute the Work contemplated under this Contract, as ascertained by the Owner, shall be paid by the Contractor and all subcontractors doing or contracting to do any part of said Work. Copies of said schedule of wage rates are available to any interested party on request.

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The Contractor shall post a copy of the prevailing wage rates of per diem wages at the job site as determined by the County of Lake in a prominent place where it can be easily seen by the workers.

- 49.3.2 Employer payments other than those itemized in said schedule of wage rates, as defined in Section 1773.1 of the Labor Code, shall be paid in accordance with the terms of the collective bargaining agreement applicable to the type or classification of the worker or mechanic employed on the Work.
- 49.3.3 All wages paid, including payment for travel and subsistence payments to workers, shall comply with requirements of Section 1773.8 of the Labor Code.
- 49.3.4 Pursuant to Section 1777.5 of the Labor Code, each apprentice shall be paid in accordance with the terms of the collective bargaining agreement applicable to the trade or craft at which he is employed.
- 49.3.5 The Contractor shall forfeit as a penalty to the Owner the sum of twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing rate for such work or craft in which such worker is employed for any work done under the Contract by him or by any subcontractor under him. In addition, the difference between the stipulated prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor. The Contractor and each subcontractor shall keep an accurate record showing the name, occupation, and actual per diem wages paid to each worker employed on the Work contemplated by this Agreement, which record shall be kept open at all reasonable hours to the inspection of the Owner, and to the Division of Labor Law Enforcement. Said Owner shall have, at his election, all the remedies provided by Section 1775 of the Labor Code for the recovery of said penalty.
- 49.3.6 Claims and disputes pertaining to labor classifications shall be decided by the Owner unless local law provides otherwise. The Contractor shall diligently proceed with the Work pending settlement of any dispute which otherwise might delay completion.
- 49.3.7 The wages set forth are the minimum that may be paid by the Contractor. Nothing contained in the Contract Documents shall be construed as preventing the Contractor from paying more than the minimum rate.

50. OVERTIME WORK

- 50.1 Overtime and shift work may be established as a regular procedure by the Contractor and with the written permission of the Engineer. Such permission may be revoked at any time. No work other than overtime and shift work established as a regular procedure shall be done between the hours of 6:00 p.m. and 7:00 a.m., nor on Saturdays, Sundays or legal holidays, except such work as is necessary for the proper care and protection of the work already performed or except in case of an emergency.
- 50.2 All costs for overtime inspection, including those occurring as a result of overtime and shift work established as a regular procedure, shall be paid for by the Contractor. Overtime inspection shall include inspection required during holidays, Saturdays, Sundays, and any weekday between the hours of 6:00 p.m. and 7:00 a.m. Such costs will include, but will not necessarily be limited to, engineering, inspection, general supervision and other expenses which are directly chargeable to the overtime work. All such charges shall be deducted by the Owner from payments due the Contractor.

* * * END OF GENERAL CONDITIONS * * *

SUPPLEMENTARY GENERAL CONDITIONS

These supplementary general conditions add to, amplify, clarify, and in some cases revise the “General Conditions” as found in these Specifications. In the event of a discrepancy, these Supplementary General Conditions shall govern over the General Conditions.

The section numbers of these Supplementary General Conditions correspond to the section numbers of the General Conditions. The General Conditions are hereby revised by adding or amending the following sections:

SECTION 15: TIME FOR COMPLETION AND LIQUIDATED DAMAGES

Replace the following subsections:

15.5 Since Time is of the essence, the Contractor is anticipated to receive the Notice to Proceed (NTP) from the Owner between December 10, 2024 and December 17, 2024 and will be allowed to commence work under this contract immediately following the NTP and fully complete the work no later than April 17, 2026.

Add the following subsections:

15.5.1 The Contractor shall pay to the Owner for each and every day, including Saturdays, Sundays and legal holidays, that he shall be in default in completing the whole work to be done under contract time, the sum of one thousand (\$1,000.00) per day, which sums are by the execution of the Agreement mutually agreed upon as liquidated damages which the Owner will suffer by reason of such default. The owner shall have the right to deduct the amount of such damages from any monies due or to become due the Contractor under this Contract.

SECTION 38.2: USE OF APPRENTICES ON PUBLIC WORKS PROJECTS

Add the following provisions to the end of Section 38.2:

“A contractor’s use of Lake County residents as apprentices on a County public works’ project in accordance with Section 1777.5 of the California Labor Code may be included in the calculation to determine eligibility for a local work force discount but may not exceed the ratios provided in Section 1777.5.

On projects in excess of \$125,000, prior to commencement of work, the prime contractor shall submit a plan acceptable to the Owner which outlines how the apprenticeship requirements will be met by all contractors working on the project.

At any time during the term of the contract and for a period of 30 days thereafter, the prime contractor shall, within 5 days of request by the Owner, provide evidence of compliance with Section 1777.5.

SECTION 51: OCCUPANCY PRIOR TO COMPLETION

Add Section 51, “Occupancy prior to completion”, as follows:

51.1 The Owner reserves the right to occupy, on written notice, any portion of the work at any time before completion while work is in progress. In the event of such occupancy, the Contractor

shall provide, without additional cost to the Owner, suitable protection by means of fencing barriers, posted signs or other method as required to prevent persons

SUPPLEMENTARY GENERAL CONDITIONS

Page 1

other than those directly connected with the work from entering remaining areas where continuing work is being conducted, vehicles are operating, or materials are stored.

51.11.1.1 The County's right to sequence Work in manner which would avoid disruption to the County's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities require by this Contract; the County's or any Inspector's enforcement of government act or regulation, or the provisions of the Contract Documents.

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Work by Owner.
4. Future work.
5. Owner-furnished products.
6. Access to site.
7. Coordination with occupants.
8. Work restrictions.
9. Specification and Drawing conventions.
10. Miscellaneous provisions.

1.3 PROJECT INFORMATION

- A. Project Identification: Lake County Sheriff's Administration Facility, Bid No. 250816.

1. Project Location: 1431 Hoyt Avenue, Lakeport, CA 95453 B.

Owner: County of Lake, Public Services Department.

1. Owner's Representative: Lars Ewing, Public Services Director, 333 Second Street, Lakeport CA 95453 (707) 262-1618.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:

1. The Project includes renovation of existing 1-story building originally constructed in 1994. Demolition scope of work includes removal of existing partition, finishes, root top mechanical equipment, electrical equipment. Plumbing fixtures and portion of existing parking stalls. Proposed scope of work includes adding a new second floor within existing structure, new building addition for elevator and supporting equipment room, seismic

upgrade, fully automatic fire sprinkler system, new roof top mechanical equipment, new accessible public parking stalls, and secured parking lot. Approximately 20,323 SF on existing ground floor will include offices, breakroom briefing room, weapons room, interview rooms, evidence room with support spaces, storage, restrooms, locker rooms, and corridors. A new second floor with 3,496 SF of space will provide future office expansion and circulation area. B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

- A. Owner will contract for Testing & Inspections, Commissioning Agent, Geotechnical Engineer Observation & Inspections, IT/Telecom Equipment Installation before, during, and after project activities. Work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.6 CONTRACTOR-FURNISHED PRODUCTS

- A. Contractor shall furnish products indicated. The Work includes unloading, handling, storing, and protecting Contractor-furnished products as directed and turning them over to Owner at Project closeout.

1.7 WORK SEQUENCE

- A. The Contractor shall Coordinate the construction schedule and operations with Project Coordinator and Engineer.

1.8 ACCESS TO SITE

- A. General: Contractor shall have use of Project site for construction operations as indicated on Drawings and as indicated by requirements of this Section.
- B. Use of Site: Work will be conducted between 7:00 AM through 4:30 PM Monday through Friday except Holidays. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.9 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and adjacent buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate

Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

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1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.10 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public roads and highways and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: All work must be performed between 7:00 AM through 4:30 PM Monday through Friday except Holidays, unless otherwise agreed.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify County not less than ten days in advance of proposed utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 1. Notify County not less than two days in advance of proposed disruptive operations.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- B. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard.

1.12 PROJECT SCHEDULE

- A. The Owner will issue a "Notice of Award" letter to the Contractor after the Owner's regular Board meeting. The contract, certificate of insurance, and performance and payment bonds shall be returned/submitted no later than 10 days after receiving the contract for

signature.

- B. Within 10 days after receipt of the contract, certificate of insurance, and performance and payment bonds, the County will issue a Notice To Proceed.
- C. Work may begin on or after the date specified in the Notice To Proceed.

1.13 REGULATORY REQUIREMENTS

- A. Owner has contacted governing authorities and reviewed design requirements of local, state and federal agencies for applicability to Project and secured the following permits and agreements, or confirmation of no jurisdiction, which are included herein as exhibits or will be issued as Bid Addendums when completed:
 - 1. County of Lake, Sewer/Water Department (fees paid)
 - 2. County of Lake, Environmental Health Department (Permit-pending)
 - 3. Lakeport Fire District (Permit-pending)
 - 4. Lakeport School District (fees paid)
 - 5. County of Lake, Public Works Department (fees paid)
 - 6. Lake County Air Quality Management (Permit-pending)
 - 7. County of Lake, Community Development Department (Grading Permit-pending)
 - 8. County of Lake, Building Department (Permit-pending)

1.14 MISCELLANEOUS PROVISIONS

- A. WORKMANSHIP. All work shall be performed in a neat and professional manner using the best recognized practices of the particular trade involved and shall be accomplished by mechanics and workers skilled and trained to properly complete the work required. The work shall proceed vigorously to completion once it is started. Time is of the essence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

SECTION 01 14 00

WORK RESTRICTIONS

SUMMARY
01 10 00 - 5/4

PART I - GENERAL

1.01 WORK HOURS

- A. No Work shall be done outside of standard Monday through Friday 7:00 a.m. to 4:30 p.m. working hours, on holidays or weekends unless prior written approval has been retained from the University's Representative.

1.02 PROJECT PHASING (NOT USED)

1.03 WORK SEQUENCE and WORK RESTRICTIONS (NOT USED)

1.04 CONTRACTOR'S USE OF PROJECT SITE

- A. CONTRACTOR's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings.

1.05 OWNER OCCUPANCY (NOT USED)

1.06 SUBSTANTIAL COMPLETION

- A. Substantial Completion shall be applicable to the entire Work.

1.07 PROTECTION OF PERSONNEL

- A. County of Lake personnel and public visitors will be occupying parts of the adjacent buildings during the construction period. CONTRACTOR shall take proper precautions to ensure the safety of all persons during the construction period.

1.08 WORK SITE DECORUM

- A. Extreme care to limit noise shall be taken at all times that the building is occupied. Loud or unnecessary conversation shall be avoided. The playing of radios, or any audio devices shall be strictly prohibited. Noise, that in the sole opinion of the Owner's Representative, is disturbing or disruptive to occupants of the building and adjacent properties shall be scheduled for periods when the building is not occupied.
- B. CONTRACTOR shall control the conduct of its employees so as to prevent unwanted interaction initiated by CONTRACTOR's employees with County of Lake staff, or other individuals, adjacent to the Project site. Without limitation, unwanted interaction by CONTRACTOR's employees includes whistling at or initiating conversations with passersby. In the event that any CONTRACTOR's employee initiates such unwanted interaction, or utilizes profanity, CONTRACTOR shall, either upon request of Owner's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the Owner.

- C. SMOKE AND TOBACCO-FREE ENVIRONMENT: The Owner is committed to a healthy workplace culture and environment. The project site is a Smoke and Tobacco-Free environment.

Smoking and the use of smokeless tobacco products (e.g., e-cigarettes and other unregulated nicotine products) is strictly prohibited. This policy is intended to provide a healthier, safer, and productive work environment.

- D. Alcoholic beverages are prohibited on the Owner's Project site.

1.09 INTERRUPTION OF BUILDING SERVICES

- A. Planned utility service shutdowns shall be accomplished during periods of minimum usage. In some cases, this will require Work activities before 8:00 a.m. and after 5:00 p.m. and weekend Work, at no additional cost to the Owner. At least 14 calendar days advance notice shall be given to the Owner's Representative before interruptions to utility service (refer to Utility Service Interruption/Shut Down Request) and other interferences with use of existing buildings, surrounding hardscape and roads.
- B. Shutdowns critical to the completion of the project shall be listed as Milestones on the project schedule. The CONTRACTOR shall program Work so that service will be restored in the minimum possible time and shall cooperate with the Owner in reducing shutdowns of utility systems.
- C. The Owner reserves the right to deny shutdown requests based on scheduled workload, research projects, and usage of surrounding buildings or other activities planned on campus.
- D. Owner's costs for initial planned utility service shutdowns shall be borne by the Owner. If repeat utility service shutdowns are required due to work necessary to correct CONTRACTOR's defective work, mistakes in new work layout such as misalignment or installation conflicts with other new work, Owner's costs for repeat shutdown(s) will be deducted from Contract Sum.

1.10 SITE INGRESS AND EGRESS

- A. Access to Project site shall be as indicated on the Drawings. Access to Project site is limited to designated routing on existing access roads. The CONTRACTOR and their employees, subcontractors, suppliers or delivery personnel must stay on the designated roads and may not drive, ride or walk to other locations unless prior permission is provided in writing by the Owner's Representative.
- B. CONTRACTOR shall take all necessary precaution to ensure the safety of the bicyclists and pedestrians that use the campus roads.

- C. CONTRACTOR shall clean the site access and roads affected by the Work and shall maintain such in a dust free and safe and usable condition for motorists, bicyclists and pedestrians. During inclement weather CONTRACTOR shall closely monitor conditions to prevent slickness of roads.
- D. CONTRACTOR shall be permitted to block only 1/2 of a street at a time for momentary site access, unless specified otherwise. The street shall be operational and usable by the Owner at all times.

1.11 MOTOR VEHICLE AND BICYCLE TRAFFIC CONTROL

- A. CONTRACTOR shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. The CONTRACTOR shall provide a schedule of any activity that will impact traffic, or any planned lane or street closure, for approval by the Owner's Representative and shall give a minimum of 14 business days notice before closing any street or access.
- B. CONTRACTOR shall furnish at CONTRACTOR's expense all signage barricades, lights, and flaggers required to control traffic and shall provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for the protection of the public; and maintain, from the beginning of twilight through the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and Work.
- C. CONTRACTOR shall provide directional signs for use throughout the duration of the Project. The quantity shall be determined by the Owner's Representative and CONTRACTOR during a mandatory Pre-construction site meeting. CONTRACTOR shall prepare a mock-up of the sign for approval by the Owner's Representative.
- D. It is the responsibility of the CONTRACTOR performing Work on, or adjacent to, a roadway or highway to install and maintain such devices which are necessary to provide reasonably safe passage for the traveling public, including pedestrians and bicyclists, through the Work, as well as for the safeguard of workers. Before Work begins, a site meeting shall be held to discuss motor vehicle and bicycle traffic control plans for handling traffic through a construction or maintenance zone. Traffic control plans shall be submitted for review by the Owner's Representative and public agency or authority having jurisdiction over the roadway or highway. These traffic control plans shall be prepared by persons knowledgeable about the fundamental principals of temporary traffic controls and the work activities to be performed. The design, selection, and placement of traffic control devices for the traffic control plan shall be based on engineering judgment and in accordance with Part 6 of the California Manual on Uniform Traffic Control Devices for Streets and Highways.

- E. All metal plating and metal bridging shall be non-skid with waffle-patterns or right-angle undulations or shall be coated with a non-skid product. Plating shall be installed with no protruding edges or corners sticking up and with no bouncing or shifting.

PART II - PRODUCTS – Not applicable to this Section.

PART III - EXECUTION – Not applicable to this Section.

END OF SECTION 01 14 00

LAKE COUNTY SHERIFF'S
ADMINISTRATION FACILITY

September 25, 2024

SECTION 01 22 00 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The bid items will be paid by Lump Sum Prices. They constitute all of the labor and costs for the completion of the work.
 - 1. No direct or separate payment will be made for providing miscellaneous temporary or accessory works and services, including but not limited to OWNER's and CONTRACTOR's field offices and sheds, surveys, job signs, sanitary requirements, testing, safety devices, submittals, record drawings, water supplies, dust controls, power, maintaining traffic, removal of CONTRACTOR generated waste, watchmen, security, bonds, insurance, cleanup, and all other conditions of the Contract Documents.
- B. All CONTRACTOR Health and Safety provisions to perform the work will be included in related bid items.
- C. Contractor quality control, record drawings, project meetings, and associated testing provisions during the progression of the work will be included in the related bid items.

1.2 RELATED DOCUMENTS

- A. Drawings and Technical Specification.

1.3 SUMMARY

- A. This Section specifies administrative and procedural requirements for lump sum, unit price, and contingency pay items.
 - 1. Bid prices shall be based on Lump Sums and include all necessary material, overhead, profit, and applicable taxes and permit fees.
 - 2. Refer to individual Technical Specifications sections for construction activities requiring the establishment of bid prices, as applicable.
 - 3. OWNER reserves the right to reject the CONTRACTOR's work-in-place until the work meets the requirements of the Drawings and Specifications.

PAYMENT PROCEDURES

01 22 00 - 1/1

SECTION 01 23 00

ALTERNATES

PART I - GENERAL

1.01 GENERAL

- A. This Section identifies each Alternate and describes basic changes to the Work only when that Alternative is made a part of the Work by specific provision in the Agreement.
- B. Lump Sum Base Bid and Alternates shall include costs of all supporting elements required, so that combination of Lump Sum Base Bid and any Alternates shall be complete. Scope of Work for all Alternates shall be in accordance with applicable Drawings and Specifications.
- C. Except as otherwise specifically provided by University, Work described in Alternates shall be completed with no increase in Contract Time.
- D. This Section includes only non-technical descriptions of the Alternates. Refer to Sections of Division 2 - 48 of the Specifications for technical descriptions of the Alternates.
- E. Coordinate related Work and modify surrounding Work as required to integrate Alternates into the Work properly and completely.

1.02 DESCRIPTION OF ALTERNATES

- A. ADD ALTERNATE #1: Elevator Maintenance Service Contract – 12 Months
- B. ADD ALTERNATE #2: Elevator Maintenance Service Contract – 60 Months
- C. ADD ALTERNATE #3: Solar / PV Parking Canopies (pending Bid Addendum – Appendice I)

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not applicable to this Section

END OF SECTION 01 23 00

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

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ALTERNATES

LAKE COUUNTY SHERIFF'S
ADMINISTRATION FACILITY

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SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - A. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - A. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - B. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copy of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- A. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.

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- b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate
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Contractors that will be necessary to accommodate proposed substitution.

- c. Provide a detailed side-by-side comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes, such as performance, size, weight, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviation, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects with project names and addresses and names and addresses of engineers and owners.
- h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
- j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

- B. Owner's Action: If necessary, Owner will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Owner will notify Contractor through Project Coordinator of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Forms of Acceptance: Change Order, Construction Change Directive, or Owner's Supplemental Instructions for minor changes in the Work.

SUBSTITUTION PROCEDURES

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- b. Use product specified if Owner does not issue a decision on use of a proposed substitution within time allocated.

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1.5 Q
QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.
- B. Request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - 2. Will provide the same warranty for substitution as for specified product.
 - 3. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
 - 4. Waives claims for additional costs which may subsequently become apparent.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Owner or Engineer will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution provides sustainable design characteristics that specified product provided.
 - c. Substitution request is fully documented and properly submitted.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.

SUBSTITUTION PROCEDURES

LAKE COUNTY SHERIFF'S
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- f. Requested substitution is compatible with other portions of the Work.
- g. Requested substitution has been coordinated with other portions of the Work.
- h. Requested substitution provides specified warranty.

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- i. I
f requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed unless agreed upon by Owner and Engineer.

C. Substitutions for Convenience: Owner will consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Owner.

- 1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
- b. Requested substitution does not require extensive revisions to the Contract Documents.
- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is fully documented and properly submitted.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

SUBSTITUTION PROCEDURES

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ADMINISTRATION FACILITY

END OF SECTION

SECTION 01 25 50

CLARIFICATION/INFORMATION PROCEDURES

PART I - GENERAL

1.01 DESCRIPTION

- A. This Section contains the procedures to be followed by Contractor for submitting a Request for Information (RFI) upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or Drawings or upon having any question concerning interpretation.
- B. Section Includes
 - 1. RFI Administrative requirements
 - 2. RFI Procedures
 - 3. RFI Execution

1.02 RELATED DOCUMENT SECTIONS

- A. Conditions of the Contract: Governing requirements for changes in the Work, in Contract Sum and Contract Time.
- B. Section 016100 – PRODUCT REQUIREMENTS: Product options, substitutions, omissions, and improper descriptions.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Description: Section provides procedure for Contractors to obtain interpretation or clarification of the Contract Documents, or identify apparent conflicts, omissions, or errors in the Contract Documents.
- B. Responsible Person for Contractor: Submit name of the individual authorized to receive Requests for Information documents, and who is responsible for forwarding Request.
- C. RFI Format: Submit all Requests for Information on the form attached at the back of this Section, or electronic and/or web-based construction administration software provided or accepted by the Owner.

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1.04 RFI PROCEDURES

A. RFI Format, Numbering and Subject:

1. RFI Format: Submit all requests for clarification or additional information in writing to Owner's Representative using the RFI Request for Information form provided at the back of this Section or obtained from Owner's Representative.
2. RFI Numbering: Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix for resubmissions. For example, the first RFI is numbered "001". The second RFI is numbered "002" and so on. The first resubmittal of RFI "002" will be numbered "002a".
3. RFI Subject: Limit each RFI to one (1) subject only. B. RFI Submittal conditions:
 1. Discovery of unforeseen condition or circumstance not described in the Contract Documents.
 2. Discovery of an apparent conflict, discrepancy, or inconsistency in or between portions of the Contract Documents.
 3. Discovery of a situation, direction or apparent omission that cannot be reasonably inferred from the intent of the Contract Documents.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 EXECUTION OF RFI's

- A. Email the Owner's Representative the RFIs. Emailed RFI requests received after normal business hours and/or received on non-normal workdays, as defined in Specification

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

Section 013100—COORDINATION, Item 1.07.F.4.A will begin notification time starting at 7:00 a.m. the following workday.

- B. Failure to provide proper information: RFIs will not be recognized or accepted if, in the opinion of Owner's Representative, one of the following conditions exist:
 - 1. Contractor submits the RFI as a request for substitution.
 - 2. Contractor submits the RFI as a Submittal.
 - 3. Contractor submits the RFI as a Contract Document discrepancy or omission without through review of the Documents (Capricious submission).
 - 4. Contractor submits the RFI assuming portions of the Contract Documents are excluded or by taking an isolated portion of the Contract Document in part rather than in whole.
 - 5. Contractor submits the RFI in an untimely manner without proper coordination and scheduling of Work of other Trades.
 - C. Response Time: Request clarifications or information immediately upon discovery of need. Submit RFI's in a timely manner allowing full response time to avoid impacting Contract Schedule.
 - 1. Owner's Representative, whose decision will be final, shall resolve issues and respond to questions of Contractor , in most cases, within fourteen (14) calendar days. Actual time may be lengthened for complex issues, or shortened for expedited situations, as mutually agreed in writing.
 - 2. After submission of an RFI by Contractor and prior to receipt of the RFI response from Owner, the Contractor proceeds with effected Work at own risk. Any portion of the Work not constructed in accordance with Owner interpretation, clarification, instruction or decision is subject to removal and replacement at Contractor expense.
 - D. Failure to Agree: In the event of failure to agree to the scope of the Contract requirements, Contractor shall follow procedures set forth in Article 4 of the General Conditions of the Contract.
- 3.02 Refer to the following Attachment
- A. Request for Information

END OF SECTION 01 25 00

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

REQUEST FOR INFORMATION

Project #: _____ Project Title: _____
RFI #: _____ Date: _____ HCAI #: _____

County of Lake Public Services 333 2 nd Street, Lakeport, CA 95453 Attn.: <u>Capital Project Manager</u> P: 707-262-1618 C: 707-245-6911 Email: Joseph.Cooper@lakecountyca.gov	From:	

SUBJECT: _____

SPEC SECTION/DRAWING #: _____ PARA: _____ DETAIL: _____
RM # _____ GRID # _____

TRANSMITTAL RECORD	Requestor to County PS	County PS to A/E	A/E to County PS	County PS to Requestor	Notes
Date Submitted					

INFORMATION NEEDED: _____

CONTRACTOR'S PROPOSED RESOLUTION: _____

REQUESTOR SIGNATURE: _____ REPLY REQUIRED BY: _____

☐ ATTACHMENTS: _____

REPLY:

REPONDER SIGNATURE: _____ DATE: _____

UNLESS OTHERWISE INDICATED ABOVE, THE REPLY TO THIS RFI IS NOT INTENDED TO BE A CHANGE DIRECTIVE. SHOULD THE CONTRACTOR, SUBCONTRACTOR, OR SUPPLIERS FEEL THAT THE REPLY WILL IMPACT THE PROJECT COST OR SCHEDULE; IT SHOULD IMMEDIATELY BE CONVEYED TO THE OWNER'S PROJECT MANAGER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

COPIES: ☐ COUNTY ☐ CONSULTANTS ☐ _____ ☐ _____ ☐ _____ ☐ FILE

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CLARIFICATION/INFORMATION PROCEDURES

August 13, 2024

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGERS IN THE WORK

- A. Owner will issue through Project Coordinator, supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Project Coordinator will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Project Coordinator are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 10 days, after receipt of Proposal Request, Contractor shall submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.

- d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and
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finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- e. Quotation Form: Use forms acceptable to Engineer.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner's Project Coordinator.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use forms acceptable to Engineer.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Project Coordinator will issue a Change Order for signatures of Owner and Contractor.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Owner's Project Coordinator may issue a written Construction Change Directive authorizing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

August 13, 2024

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Within 10 days after the effective date of the Contract, submit a complete schedule of values of all lump sum bid items showing the value assigned to each part of the work.
 - 2. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule in sufficient detail to serve as the basis for progress payments during construction.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Arrange schedule of values consistent with format that is satisfactory to the Project Coordinator.
 - 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
 - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site.
 - 4. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 - 5. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.

6. Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
7. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.

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8. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and Project Coordinator, and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Project Coordinator by the 5th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
- D. Application Preparation: Complete every entry on the agreed to form. Execute by a person authorized to sign legal documents on behalf of Contractor. Project Coordinator will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit two signed original copies of each Application for Payment to Project Coordinator by a method ensuring prompt receipt. One copy shall include waivers of lien and similar attachments if required as well as notarization of the authorized signature, if required.
 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

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5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Products list (preliminary if not final).
5. Sustainable design action plans, including preliminary project materials cost data.
6. Schedule of unit prices.
7. Submittal schedule (preliminary if not final).
8. List of Contractor's staff assignments.
9. List of Contractor's principal consultants.
10. Copies of building permits.
11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
12. Initial progress report.
13. Report of preconstruction conference.
14. Certificates of insurance and insurance policies.
15. Performance and payment bonds.
16. Data needed to acquire Owner's insurance.

H. Application for Payment at Substantial Completion: After Project Coordinator issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706.
 5. AIA Document G706A.
 6. AIA Document G707.
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

SECTION 01 31 00

COORDINATION

PART I - GENERAL

1.01 SECTION INCLUDES A.

Project Meetings

- B. Submittals Requirements
- C. General Contractor Coordination
- D. Coordination of Subcontractor and Separate Contracts
- E. Owner Criteria

1.02 RELATED REQUIREMENTS

- A. Section 011100 – SUMMARY OF THE WORK: Description of Contract Documents.
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 014500 – QUALITY CONTROL
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 015100 – TEMPORARY UTILITIES
- G. Section 015200 – CONSTRUCTION FACILITIES
- H. Section 015500 – VEHICULAR ACCESS AND PARKING: Traffic Regulation.
- I. Section 015600 – TEMPORARY BARRIERS, ENCLOSURES AND CONTROLS
- J. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- K. Section 016100 – PRODUCT REQUIREMENTS
- L. Section 017300 – CUTTING AND PATCHING
- M. Section 017700 – CLOSEOUT PROCEDURES: Coordination of completion reviews, inspections, and submission of documents.
- N. Section 017800 – CLOSEOUT SUBMITTALS: As-Built Documents.
- O. Division 21 - Fire Protection Systems.

P. Division 28 - Fire Alarm Systems

1.03 MEETINGS

- A. Pre-Construction/Site Mobilization Conference: Owner's Representative will administer site mobilization conference at Project site for clarification of responsibilities of Owner, Owner's Representation and Contractor, use of site and for review of administrative procedures. Site mobilization conference shall be held within fourteen (14) calendar days of Notice to Proceed, unless otherwise directed by Owner's Representative.

1. Agenda: Pre-Construction/Site Mobilization Conference shall cover the following topics at a minimum:

- a. Special Project Procedures: Implementation of requirements as specified in Section 013100 – COORDINATION.
- b. Subcontractors List: Provide PDF electronic file. Distribute and discuss list of subcontractors and suppliers.
- c. Construction Schedule: Provide per Section 013200. Distribute and discuss initial construction schedule and critical work sequencing of major elements of Work, including coordination of Owner furnished Contractor installed (OFCI) products, Owner furnished/ Owner installed (OFOI) products, and work under separate contracts, by utility agencies and companies and Owner.
- d. Designation of Key personnel: Designate key personnel and update project directory for Owner, Owner's Consultants, Contractor, major subcontractors, major materials suppliers, serving utility agencies and companies, other contractors performing work under separate contracts and governing authorities having jurisdiction.
- e. Project Communication Procedures: Review requirements and administrative requirements for written, electronic and oral communications.
- f. Change Procedures: Review requirements and administrative procedures for Change Orders, Field Orders, Owner's Representative's Supplemental Instructions, and Contractor Requests for Information.
- g. Coordination: Review requirements for Contractor coordination of Work; review sequence and schedule for work being performed for Owner under separate contracts.
- h. Submittals Administration: Provide per Section 013300 and Section 016100. Review administrative procedures for shop drawings, project data and sample submittals and review of preliminary submittals schedule.
- i. Project As-Built Documents: Provide per Section 017700 and Section 017800. Review requirements and procedures for project as-builts, specifications and other documents.
- j. Construction Facilities and Temporary Utilities: Provide per Section 015100 and Section 015200. Designate storage and staging areas, construction office areas; review temporary utility provisions; review Owner requirements for use of premises.

- k. Materials and Equipment: Review substitution requirements; review schedule for major equipment purchases and deliveries; review materials and equipment to be provided by Owner (OFCI and OFOI products).
 - l. Site Access by Owner's Representative and Owner's Consultants: Review requirements and administrative procedures Contractor may institute for identification and reporting purposes.
 - m. Testing and Inspection: Provide per Section 014550 and other sections of the Contract. Review tests and inspections by independent testing and inspection agencies, manufacturers, and governing authorities having jurisdiction.
 - n. Permits and Fees: Review Contract requirements; review schedule and process for obtaining permits and paying fees.
 - o. Hours of Work and Work Restrictions per Section 011400.
 - p. Hot Works Permit.
- B. Billing Meetings: A billing meeting will be conducted by the Owner's Representative each month prior to submittal of the Application for Payment. Agenda: review of the percent complete relating to the submitted Schedule of Values. Prior to the Billing Meeting the Contractor will submit a draft of the Application for Payment for review by the IOR and Owner Representative.
- C. Progress Meetings: Progress meetings shall be periodically scheduled throughout progress of the Work. Frequency shall be as determined necessary for progress of Work. Generally, it is intended progress meetings be held once a week as designated by the Owner's Representative.
- 1. Administration: Owner's Representative shall make physical arrangements for meetings and prepare agenda with copies for participants, preside at meetings, record minutes, and distribute an electronic file within four (4) workdays to Contractor, Owner's Consultants, and other participants affected by decisions made at meetings.

2. Attendance: Contractor's Project Manager and jobsite Superintendent shall attend each meeting. Contractor's subcontractors and suppliers may attend as appropriate to subject under discussion. Owner will have a representative at each meeting. Owner's Consultants, as appropriate to agenda topics for each meeting and as provided in Owner/Consultant Agreement, will also attend.

a. Suggested Agenda for Progress Meetings:

- 1) Building Code/Fire Marshal Issues
- 2) Design Issues
- 3) Submittals and Long Lead Items
- 4) OFCI and OFOI products.
- 5) Request for Information
- 6) Safety Issues
- 7) Scheduling Status/1 Week Prior and 3 Week Look Ahead
- 8) Potential Schedule Delay Issues
- 9) Incomplete or Non-Conforming Work
- 10) Inspection Requests
- 11) Utility Shutdowns and Dig Notifications
- 12) Instructional Bulletins and Field Orders
- 13) Change Orders/Cost Proposals
- 14) Payment Applications and As-Built Documents
- 15) Miscellaneous Business
- 16) Other items affecting progress of the Work

- D. Guarantees, Bonds, Service and Maintenance Contracts Review Meeting: Eleven months following the date of Substantial Completion, a meeting will be conducted by Owner's Representative to review the guarantees, bonds and service and maintenance contracts for materials and equipment.

- E. In addition to meetings listed above, Contractor shall hold coordination meetings and preinstallation conferences to assure proper coordination of Work.

1. Pre-installation Conferences: When required in individual Specification Sections, convene a pre-installation conference prior to commencing Work.

- a. Require attendance by representatives of firms whose activities directly affect or are affected by the Work specified.

- b. Review conditions of installation, preparation and installation procedures and coordination with related Work and Work under separate contracts.
- F. Location of all meetings will be as designated by Owner's Representative. Participants at all meetings shall be Owner's Representatives, Consultants and/or Vendors, Contractor, Superintendent, Subcontractors, and others as appropriate.

1.04 SUBMITTALS

A. Coordination of Submittals: Schedule and coordinate submittals as specified in Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES, Section 017700 – CLOSEOUT PROCEDURES and Section 017800 – CLOSEOUT SUBMITTALS.

- 1. Coordinate submittal effort of various trades, subcontractors and suppliers having interdependent responsibilities for installing, connecting, and placing into service such equipment, materials or installations as necessary for the Work.
- 2. Coordinate requests for substitutions to assure compatibility of space, operating elements, and effect on work of others.
- 3. Contractor shall submit the following submittals to the Owner's Representative who will forward directly to the appropriate State Agencies for their review and approval:
 - a. Fire Protection Drawings: Refer to Division 21
 - b. Fire Alarm System: Refer to Division 28

B. Coordination/Engineering Drawings: Submit in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES and as specified herein. C. Work Plans: Submit as specified herein.

1.05 COORDINATION

A. Coordination: Contractor shall coordinate the Work as stated in the General Conditions of the Contract. Work of the Contract includes coordination of the entire work of the Project, from beginning of construction activity through Project closeout and warranty periods. Contractor shall also coordinate Work under the Contract with work under separate contracts by Owner. Contractor shall cooperate with Owner and others as directed by Owner's Representative in scheduling and sequencing the incorporation into the Work of

Owner Furnished/Contractor Installed (OFICI) products identified in the Contract Documents.

- 1. Coordinate completion and cleanup of work of the separate trades, subcontractors, vendors, etc., in preparation for Owner occupancy.
 - 2. After Owner occupancy, coordinate access to site by various trades, subcontractors, vendors, etc., for correction of defective work and/or work not in accordance with Contract Documents, to minimize Owner disruption.
 - 3. Assemble and coordinate closeout submittals specified in Section 017700 – CLOSEOUT PROCEDURES.
- B. Construction Interfacing and Coordination: Layout, scheduling and sequencing of Work shall be solely Contractor 's responsibility. Contractor shall bring together the various parts, components, systems and assemblies as required for the correct interfacing and integration of all elements of

Work. Contractor shall coordinate Work to correctly and accurately connect abutting, adjoining, overlapping and related elements, including work under separate contracts by Owner and utility agencies, if any.

- C. Installation of Systems into Project Space: Follow routings shown for pipes, ducts and conduits as closely as practicable, as shown on the Contract Documents with due allowance for available physical space; make runs parallel with line of building. Utilize space efficiently to maximize accessibility for other installations, future maintenance and repairs. In finished areas, except as otherwise shown, conceal pipes, ducts and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- D. Utility Work: Work occurring on or in the immediate vicinity of critical utilities must be directly supervised at all times by Contractor qualified personnel. Requirements stated herein for notification, work plans, dig notification forms and marking locations of existing utilities shall apply. Contractor will be held fully liable for costs and damages due to unplanned interruption of critical utilities, including any personal injury to public, visitors, or staff.
 - 1. Provide supervision and coordination necessary to meet requirements of electrical power connection as set forth by the Pacific Gas and Electric (PG&E).
 - 2. Provide reasonable and convenient staging and access areas to permit PG&E, its vendors or subcontractors, to install, modify or remove electrical transformers or other components of the electrical power system furnished and installed by PG&E.

1.06 COORDINATION OF SUBCONTRACTORS AND SEPARATE CONTRACTS

- A. Conflicts: Conflicts shall be resolved by the Contractor bears primary responsibility for conflict resolution regarding the coordination of all building trades, subcontractors, and suppliers.
- B. Superintendence of Work: Contractor shall appoint a field superintendent who shall direct, supervise, and coordinate all Work in the Contract Documents.
- C. Subcontractors, Trades and Materials Suppliers: Contractor shall require all subcontractors, trades, crafts and suppliers to coordinate their portions of Work with the Superintendent to prevent scheduling, sequencing, dimensional and other conflicts and omissions.
- D. Coordination with Work Under Separate Contracts: Contractor shall coordinate and schedule Work under Contract with work being performed for Project under separate contracts by Owner. Contractor shall make direct contacts with parties responsible for work of the Project under separate contracts, in order to provide timely notifications and to facilitate information exchanges.
- E. Service Connections: Except as otherwise indicated, final connection of mechanical services to general work is defined as being mechanical work; final connection of electrical services to general work is defined as electrical work.

1.07 OWNER CRITERIA

- A. During the Base Construction time, Contractor shall allow Owner 14 calendar days to move Owner equipment and/or provide furnishings. Contractor shall notify Owner's Representative in writing a minimum of fourteen (14) calendar days prior to completion of area described above.
 - 1. Contractor shall show this time as a distinct activity on the detailed project schedule.

- B. Equipment Coordination: Contractor and Owner supplied equipment will require complete installation data be exchanged directly between Contractor and vendors and subcontractors involved as progress of Project requires. Individual requesting information shall advise when it is required. Incorrect, incomplete, delayed or improperly identified equipment causing delay or error in installation will require entity causing such action to be liable for modifications or replacements necessary to provide correct and proper installation, including relocations.
- C. Contractor shall provide large scale casework and equipment drawings for casework and equipment service rough-in locations (dimensioned from building features), service characteristics, and locations of studs or blocking where such locations are critical to mounting or otherwise installing equipment and casework. Furnish sizes and spacing required for mechanical and electrical cutouts, and a complete brochure of fittings, sinks, outlets, or other information to provide a complete assemblage of the items and accessories being furnished.
- D. Interruption of Services: Construction Work shall accommodate Owner's use of surrounding and adjacent premises during the construction period and shall provide continuous public access and use of surrounding and adjacent facilities. Contractor shall not deny access to public use facilities until an alternate means of public use has been provided. An interruption of service is defined as any event which in any way interrupts, disrupts or otherwise discontinues, even momentarily, the services provided by Owner to its patients and staff. Adequate notice, as described below, shall be given to Owner when any interruption of services or interference with the use of existing buildings and roads are anticipated. Any interruption of service will be made only by Owner upon such notice. Interruptions to Owner services will not be made without prior notification and approval by Owner. Contractor shall never interrupt any Owner service without direct Owner participation.
1. Dig Notification: Contractor shall complete and submit for review to Owner's Representative, a Dig Notification Form, included at the end of this section, and obtain written authorization from Owner prior to the commencement of any digging activities. Digging activities include exploratory demolition, soils excavation, concrete core drilling, and saw cutting. Contractor shall include all pertinent information with the Dig Notification Form and submit with detailed work plan fourteen (14) calendar days prior to desired digging activity.
 2. The Contractor shall contact USA North 811 prior to starting underground Work to locate existing underground utilities.
 3. Contractor shall mark locations of all known utilities on ground of dig area with marker paint.
 4. Prior to commencement of digging activities, Contractor shall verify project inspector has inspected the dig site and confirmed the site marking as accurate, complete and in conformance with site utility plans.
 5. Contractor shall verify with Owner's Representative that all interested hospital departments have been notified of intent to begin digging operation.
 6. Record documents are required for dig activities. Contractor shall provide As-Built drawings.
- E. Shutdown Procedures: Contractor shall complete and submit for review and approval to Owner a Request for Shutdown form, included at the end of this section. Contractor shall include all pertinent

information to assist Owner in coordination of shutdown activities. The Shutdown Request Form shall be submitted with a detailed work plan addressing the proposed shutdown not less than fourteen (14) calendar days prior to desired shutdown.

- F. The Owner does not normally charge for its shutdown support services. However, if poor planning and/or poor execution of a shutdown by the Contractor causes excessive time and effort for Owner personnel, the Owner reserves the right to back charge the Contractor for this effort required to support such shutdown.
1. Contractor shall verify with Owner's Fire Marshal that all appropriate Interim Life Safety Measures (ILSM) are in place.
 2. Contractor shall determine that proper and appropriate coordination and notification has been completed, including written authorization from Owner's Representative, prior to shut down.
 3. Service shutdowns shall require specific work plans to be submitted to and coordinated with Owner's Representative. Work Plan should reflect various work trades, activities or entities requiring active participation with Owner teams to coordinating hospital functions with construction activities.
 - a. Contractor shall request, schedule, and conduct a General Work Plan Meeting prior to any work activity occurrence. During this meeting Contractor and Owner shall produce and agree to a list of work activities, which will require digging and/or shutdown coordination and procedures.
 - b. Owner's Representative, upon receiving the agreed submission for coordination, shall schedule the actual digging and/or shutdown at the earliest possible date not later than fourteen (14) calendar days from receipt of the submission. Operation of valves, switches, etc. to affect shutdowns shall be operated by Owner personnel only.
 - c. A shutdown is defined as any interruption of services provided by Owner to its patients and staff.
 4. Planned service shutdowns shall be accomplished during periods of minimum usage. Contractor shall plan work to restore service in minimum possible time and shall cooperate with the Owner to reduce number of shutdowns.
 - a. Notwithstanding the provisions of Article 14.6 of the General Conditions of the Contract, Contractor may be required to perform certain types of work outside normal time periods.
 - 1) Non-normal times shall include, but not be limited to, periods of time before 7:00 a.m. and after 5:00 p.m. in the evening, weekend days, or legal holidays, or such periods of time which constitute split shifts or split working periods.
 - 2) Contractor shall include allocation of the cost of this work as part of the base bid and shall not be entitled to additional compensation as a result of such work during non-normal time periods.
 - 3) Contractor shall include the non-normal periods as distinct activities on the detailed project schedule.

- 4) Contractor is advised and Contractor shall be prepared, at Owner written request, to perform certain shutdown and asbestos related work during non-normal time periods.
- G. Utility locations: Refer to Section 017600. General location of utility lines and services may be shown on the drawings or described elsewhere, Owner does not warrant the accuracy of the locations shown or described. Determination of the actual on-site locations of utility lines and services prior to the commencement of work shall be the responsibility of the Contractor shall complete layout/research for Points of Connection (P.O.C.) and clean/prep piping at P.O.C. All capping, relocation or removal of such lines and services shall be performed by Contractor as a part of the Contract. New/continued piping and services installation shall be prefabricated and in place prior to the shutdown. All materials and tools required to complete the work must be at the shutdown location(s). Contractor shall not assume existing valves will hold 100%. Contractor is required to have at least one (1) alternate method (including parts and equipment) to complete installation once shutdown has started. Note: only wheel type cutters shall be used on copper pipe to reduce contamination to existing systems/valves.
- H. Detailed Work Plans: Contractor shall develop and submit for review and approval to Owner's Representative detailed work plans for specific work activities, both inside and outside the work area, associated with impact to, or interruption of services and operation, and dig activities. Work Plans shall be submitted as a PDF electronic file with Table of Contents indexed. Work Plans shall include written description of work activity, detailed schedule with proposed sequence of operation and activity duration, type of equipment to be used, a copy of site plan highlighted to indicate sequencing and location of work and equipment, completed Request for Shutdown and/or Dig Notification forms as applicable, conformance to ILSM, and control methods for noise, vibration and airborne contaminants.
1. Work Plan submittal will not be accepted unless all required information is provided at time of submittal.
 2. Submit Work Plan at least fourteen (14) calendar days prior to the commencement of any associated work activities.
 3. Coordination/Engineering Drawings: Contractor shall provide a complete set of Coordination/Engineering Drawings that indicates the architectural and structural building components; and combines all piping, conduits, fire sprinkler system, equipment, hangers, braces and other building components into one composite drawing for each floor, wing or area of work. Submit the Coordination/ Engineering Drawings as a bookmarked PDF electronic file. These drawings are for the Contractor's and Owner's use during construction and shall not be construed as replacing any shop drawings, "As-Builts", or record drawings required elsewhere in the Contract Documents. Owner's review of these drawings is for design intent only and shall not relieve the Contractor of the responsibility for coordination of all work performed per the requirements of the Contract.
 - a. Contractor shall prepare and submit complete $\frac{1}{4}" = 1' - 0"$ coordination drawings, including plans, sections, details as are appropriate indicating the area layout, complete with debris removal area and materials access points, and all mechanical and electrical equipment in all areas and within above and below ceiling spaces for new and existing conditions, including bottom of all ducts, plenum, pipe and conduit elevations. Drawings shall show all structural and architectural

components, restraints and other obstructions that may affect the work. Electronic or photo reproduction of Owner's Architectural Drawings is not acceptable.

- b. Contractor and each Subcontractor shall ensure all relevant mechanical and electrical equipment, piping, conduit, fire sprinkler system, ceiling hangers, braces etc., are shown and will fit, together with necessary items such as lights, ducts, fans, pumps, piping, conduit and the like.
- c. Contractor shall indicate all locations of expansion/ seismic joints and indicate how expansion for piping, conduit and other components is provided.
- d. Contractor shall indicate all locations for access doors or other means of access at conditions above and below for items requiring access or service including but not limited to valves, mechanical equipment, electrical equipment valves and other components. The Contractor is responsible that piping, conduit, braces and other obstructions do not block access to items indicated above.
- e. Submit completed and fully coordinated PDF electronic indexed file drawings with bookmarked Sheet Index together with Contractor comments indicating possible areas of conflict for review to Owner's Representative prior to start of work.
- f. Penetrations: Contractor shall prepare a sleeving layout (1/4" scale) indicating size and locations of sleeves. Trades shall indicate to Contractor their requirements and locations. PDF electronic files to applicable trades and Owner's Representative.
- g. Completion of work: All coordination drawings shall be submitted together with record (as built) drawings of all trades involved in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Request for Shutdown (RFS) Info/Impact Report
- B. Dig Notification Form

END OF SECTION 01 31 00

REQUEST FOR SHUTDOWN (RFS) INFO/IMPACT REPORT

PROJECT NAME: _____

OWNER RFS# _____

PROJECT #: _____ HCAI #: _____ CONTRACTOR RFS #: _____

TODAY'S DATE: _____ SHUTDOWN DATE: _____ SUSPEND DATE: _____

TO: COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 <u>Project Manager's email address:</u> <u>Joseph.Cooper@lakecountycalifornia.gov</u>	FROM:
---	---

Request Date: _____ Shutdown Target Date: _____

Requested By: _____ Requestor's Phone #: _____

Shutdown Work (Utility Specific): _____

Scope (Brief Description of Work): _____

Impact (Areas & Users): _____

Additional Comments: _____

DIG NOTIFICATION FORM

PROJECT #: _____ HCAI#: _____ DATE: _____

TO: COUNTY OF LAKE	FROM:
--------------------	-------

PUBLIC SERVICES
333 2nd Street
Lakeport, CA 95453

P:707-262-1618
C:707-245-6911

Project Manager's email address:
Joseph.Cooper@lakecountycalifornia.gov

1. Has USA been notified? YES ___ NO ___
When?

2. Are all known utilities marked? YES ___ NO ___

3. Location of dig shown on attached site plan? YES ___ NO ___
Purpose

4. Dates digging will take place _____
Place _____

Signed:

OWNER USE ONLY

Date received:

1. Utilities verified by IOR? YES ___ NO ___

2. Dig activities coordinated with all parties? YES ___ NO ___

3. Comments:

Date Authorized: _____ Signed: _____ Date _____ Returned: _____

Signed:

Comments: (Utilities encountered, disruptions, successes, weather, etc.)

Copies:	Owner _____	Consultants _____	File _____

SECTION 01 32 00

CONTRACT SCHEDULES

PART I - GENERAL

1.01 SCOPE

- A. Preliminary Contract Schedule, Contract Schedule, updated Contract Schedules, Short Interval Schedules (SIS), Recovery Schedules and As Built Schedule.
- B. Sub-networks of activities (Fragnets) supporting Time Extension Requests.

1.02 DEFINITIONS

- A. Construction Schedule/CPM Schedule/Schedule: The most recent; Baseline Schedule, Updated Schedule or Revised Schedule.
- B. Final Baseline Schedule: A final and ongoing Schedule for the project that has been reviewed and accredited by the Owner's Representative
- C. Critical Work activities are defined as Work activities that, if delayed or extended, will cause a critical delay as defined in General Conditions Article 8. All other Work activities are defined as non-critical Work activities and are considered to have float.
- D. Float is defined as the time that a non-critical Work activity can be delayed or extended without causing a critical delay as defined in General Conditions Article 8. Neither the Contractor nor the Owner shall have an exclusive right to the use of float. Float is a shared resource available to each party to the contract. The Contractor shall document the effect of the use of float on the updated Contract Schedule.
- E. Recovery Schedule: Schedule required when any Revised Schedule or Update Schedule shows the work to be more than 14 calendar days behind the latest Owner-accepted contract end date.
- F. Short Interval Schedule (SIS): Schedule prepared on a weekly basis demonstrating the work accomplished the prior week and work planned for the upcoming three weeks.

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples:
 - 1. Proposed Scheduling Software and qualifications of individual preparing schedules.
 - 2. Preliminary Contract Schedule
 - 3. Contract Schedule including graphical and tabular reports.
 - 4. Monthly Updates to Contract Schedule, including Narrative Report.

5. Short Interval Schedules
 6. Final As-Built Schedule
- B. Include an electronic version of all submittals required by this specification, including Narrative prepared in MS Word or .pdf format, CPM schedule in .xer file (P6 backup) or other schedule native file format if accepted under 1.3. A.1 above, .pdf of full schedule, and .pdf of critical path. The following fields shall be included:
1. Activity identification
 2. Activity description
 3. Duration, start, and finish dates.
 4. Percentage of completion
 5. Total float
 6. Responsible party
 7. Predecessors and successors

PART II - PRODUCTS

2.01 SOFTWARE

- A. The Contractor shall use Primavera P6 by Oracle Corporation, or equal to produce the schedule and all required graphical and tabular reports.

PART III - EXECUTION

3.01 PRELIMINARY CONTRACT SCHEDULE

- A. Within 10 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall submit the Preliminary Contract Schedule in both native and .pdf format to the Owner's Representative for acceptance. The Preliminary Contract Schedule shall represent the Contractor's plan for accomplishing the work within the Contract time showing all significant milestones for the Contract period as well as a detailed work plan for the first 90 calendar days following the Notice to Proceed. This detailed work plan shall identify in detail the following activities for the first 90 calendar days:
1. Preparation of equipment and material submittals for review. List Project submittals within Schedule per each specification section including Division 1 requirements. Indicate dates for submission of required submittals. Note: schedule shall include 18 calendar days for the Owner's review of the Preliminary Contract Schedule.
 2. Make submissions within the following number of days after the Notice to Proceed:
 - a. Items needed in initial stages of Work or requiring long lead-time for ordering: 30 calendar days.

- b. Deferred approval submittals, for review and approval by agencies such as Owner's when required: 60 calendar days.
 - c. Electrical, mechanical and equipment items other than those covered by item "a" above: 60 calendar days.
 - d. All other items: 90 calendar days.
 - 3. Procurement schedule.
 - 4. Critical Path for the first 90 calendar days.
 - B. The Preliminary Contract Schedule shall acknowledge significant known constraints and include all anticipated activities prior to the Notice to Proceed.
 - C. The Preliminary Contract Schedule shall not include any actual dates or progress measured against any activities.
 - D. Acceptance of the Preliminary Contract Schedule is a condition for approval of the first progress payment application.
 - E. The Contractor's progress shall be measured against the Preliminary Contract Schedule until such time as the Owner accepts the Contractor's first Contract Schedule. The Preliminary Contract Schedule shall be incorporated into the Contractor's proposed Contract Schedule.
 - F. Unless approved by the Owner's Representative, there shall be no activities shown with durations greater than 14 calendar days (excluding submittals, submittal reviews, and procurement activities).
- 3.02 CONTRACT SCHEDULE (BASELINE)
- A. The Contract Schedule shall represent a practical plan to fully complete the Contract within the Contract Time. The Contract Schedule shall include a complete sequence of construction, in adequate detail for coordination of the Work and shall be coordinated with the preparation of the Schedule of Values per 01 29 00 Measurement and Payment.
 - B. Form
 - 1. The proposed first contract schedule shall be produced using CPM (Critical Path Method) techniques, in the PDM (Precedence Diagram Method) method of scheduling. The Contract Schedule shall be calculated using the Retained Logic method. Progress override calculations shall not be acceptable. The schedule shall not use negative float or constraints on work activities.
 - 2. The Contract Schedule shall identify all holidays and non-working days.
 - 3. Identity of the party responsible for the activity (i.e., Owner, General Contractor, specific subcontractor, etc.)
 - 4. The Contract Schedule activities shall be coded with the following information applicable to each activity:

- a. Area of the project
- b. Identity of the party responsible for the activity (i.e., Owner, General Contractor, specific subcontractor...)
- c. Specification section applicable to activity
- d. Phase
- e. Sequence – The following sequences shall be identified:
 - 1) Administrative
 - 2) Submittal and Review
 - 3) Fabrication
 - 4) Construction: including phasing and sequencing as identified in 011400 Work Restrictions
 - 5) Inspection, Commissioning, and Close-out

C. Content

1. The Contract Schedule shall identify all Work activities in correct sequence for the completion of the Work within the Contract Time. Work activities shall include the following:

- a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or Owner's Representative's prior acceptance.
 - 1) Show dates for the submission, review, and approval of each such submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by the Owner.
 - 2) The schedule shall allow submittal review time in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples.
- b. System test dates.
- c. Scheduled overtime Work to the extent permitted by Contract Documents.
- d. Dates Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the Owner.
- e. Dates Contractor requests orders and decisions from the Owner on designated items.
- f. Dates Contractor requests Owner-furnished equipment.

- g. Dates Contractor requests Owner-furnished utilities.
 - h. Planned dates for shutdown, connection, and relocation of existing utilities.
 - i. Planned dates for connecting to or penetrating existing structures.
 - j. Planned dates for scheduled inspections as required by Codes, or as otherwise specified.
 - k. Commissioning Sequence and activities for all Building Systems.
- 2. Unless approved by the Owner's Representative, there shall be no activities shown with durations in excess of 7 calendar days (excluding submittals, submittal reviews, and procurement activities). Milestones should be listed for the completion of wings, floors, and other similar areas.
 - 3. The allowable monthly rain days per the Supplemental Conditions shall be incorporated into the Schedule.
 - 4. Identify types of calendars used and the logic of their application.

D. Submission

- 1. The first Contract Schedule shall be submitted to the Owner not later than 30 calendar days after Notice to Proceed. The period covered by Contract Schedule shall be the Contract Time as specified in the Notice to Proceed. The Contract Schedule shall incorporate the logic of the Preliminary Contract Schedule covering the first 90 calendar days following the Notice to Proceed. Items to be included with first submission:
 - a. Contract Schedule (Baseline)
 - b. Critical Path Schedule excluding all non-critical Work activities.
 - c. Narrative
- 2. Tabular Computer Reports
 - a. As requested by the Owner, the Contractor shall submit various computer-generated tabular reports.
 - b. As requested by the Owner's Representative, the Contractor will be required to submit additional Schedule Reports.

E. Acceptance

- 1. Upon receipt, the Owner's Representative shall review the proposed first Contract Schedule. Within 21 calendar Days of the Owner's receipt of the proposed first Contract Schedule, the Owner's Representative shall schedule a review meeting with the Contractor for the purpose of jointly reviewing the proposed first Contract Schedule.

2. If the proposed first Contract Schedule is accepted by the Owner's Representative, it shall become the Contract Schedule (or Baseline Schedule). Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the Contract Schedule.
3. If the Contractor or the Owner's Representative determines the proposed first Contract Schedule to need revision, the Contractor shall revise and resubmit the proposed first contract schedule to the Owner's Representative within 14 calendar days for acceptance. If accepted, it shall become the Contract Schedule. Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the Contract Schedule. If not accepted the Contractor will resubmit within 10 calendar days for a new review period to start.
 - a. No progress payment beyond the second progress payment will be paid to the Contractor until such time as the Owner's Representative has approved the Contractor's first proposed Contract Schedule.

F. Schedule Logic

1. Activity schedule logic should normally be of Finish-to-Start relationship type and assembled to show order in which Contractor proposes to carry out the Work. The logic should indicate restrictions of access, availability of Work areas, and availability and use of manpower, materials, and equipment. Form basis for assembly of schedule logic on the following criteria:
 - a. Indicate which activities must be completed before subsequent activities can be started.
 - b. Indicate which activities can be performed concurrently.
 - c. Indicate which activities must be started immediately following completed activities.
 - d. Indicate resource sequencing due to availability or space restrictions.
 - e. Lags shall not be used if can be represented with additional schedule detail. Finish-to-start logic ties with positive lags are not permitted. All positive time consumption should be represented by a schedule activity. Start-to-start, or finish-to-finish logic ties with negative lags are not permitted.
 - f. Lags in Start-to-Start or Finish-to-Finish relationships must not exceed the duration of the predecessor or successor activity, respectively.

G. Non-Sequestering of Float

1. Contractor shall not sequester float through scheduling techniques, including, but not limited to, constrained dates, extending Work Activity duration estimates, using preferential logic, such as lag or negative lag (lead), unless specifically requested in writing and approved by Owner's Representative. It is acknowledged that Owner-caused or Contractor-caused time

savings to Activities on, or near, the critical path will increase float, such increase in float shall not be for the exclusive use or benefit of either Owner or Contractor.

H. Out of Sequence Logic:

1. Resolution of conflict between actual work progress and schedule logic: When out of sequence activities develop in Schedule because of actual construction progress, Contractor shall submit revision to schedule logic to conform to current status and direction and include reasons in schedule update Narrative.

I. Preferential Logic:

1. The intended purpose of scheduling on a construction project is to help ensure that Contractor's work on the project is adequately planned, tracked and managed. A construction schedule can be as simple as a list of activities, organized in a logical sequence, and time scaled. The concept of construction scheduling is to see that all activities necessary to complete the work, in accordance with the contract documents requirements, are properly planned, coordinated and managed. When Contractor's schedule activities are not sequenced in the most logical manner, but rather, in a manner as to create the maximum possible opportunity for Owner interference to claim delay or interruption, the Owner will reject the schedule with a request of different sequence of activities.

3.03 EXPERIENCE REQUIREMENTS

- A. Contractor shall designate an individual from Contractor's staff or a consultant who shall be responsible throughout the duration of the project for preparation of all schedules and reports as required by this specification. This individual shall also be required to attend all meetings with the Owner's Representative as required by this specification. The Contractor shall demonstrate to the satisfaction of the Owner that the individual or consultant has at least 3 years of experience preparing, maintaining, and administering detailed project schedules on projects of the same or similar size and complexity as this project. The Contractor shall also demonstrate to the satisfaction of the Owner that the individual or consultant is proficient in the use of the scheduling software proposed for use by the Contractor on this project.
- B. Within 14 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall provide the Owner with the identification, qualifications, and experience of and references for the proposed individual or consultant.

3.04 MONTHLY UPDATES

- A. After acceptance of the first proposed Contract Schedule, Contractor shall update the Contract Schedule monthly. The update shall reflect progress as of the end of each month. Contractor shall submit monthly schedule update to the Owner's Representative for acceptance with the draft payment application and no later than the tenth day of the following month. The updates shall be made as follows:
 1. The Monthly updates shall report progress based upon percent complete of each activity or remaining duration. Actual start dates shall be recorded for those activities that have started. Actual finish dates shall be recorded for those activities that are completed. Activities that are in progress shall reflect an actual start date and the percentage completion for the activity. Actual dates shall be clearly distinguishable from projected dates.

2. The updated Contract Schedule shall reflect an up-to-date status of the contract work as completed, and materials furnished and in permanent place that qualify for payment.
 3. The updated Contract Schedule shall reflect Contract Time changes included in all processed change orders for the progress month and each preceding month.
- B. Within 5 calendar days after receipt of the updated Contract Schedule in conjunction with the Application for Payment, the Owner's Representative shall review both and determine which work and material pay items qualify for payment; the approved data will then be returned to the Contractor for input. Within 14 calendar days, the Contractor and the Owner's Representative shall meet to review the Construction CPM Schedule and discuss any changes required.
- C. The Contractor shall then revise and resubmit (if required) the Updated Contract Schedule and Application for Payment to the Owner's Representative for payment approval.
- D. The monthly update shall be calculated using retained logic with a required finish date specified as the current contract completion date. Progress Override calculations shall not be acceptable.
- E. No Applications for Payment will be processed, nor shall any progress payments become due until updated Contract Schedules are accepted by Owner's Representative. The accepted, updated Contract Schedule shall be the Contract Schedule of record for the period it is current and shall be the basis for payment during that period. Acceptance of any updated Contract Schedules shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the updated Contract Schedules.
- F. Contractor shall perform the Work in accordance with the updated Contract Schedule. Contractor may change the Contract Schedule to modify the order or method of accomplishing the Work only with prior agreement by the Owner.
- G. With each monthly updated Contract Schedule, the Contractor shall provide an accompanying narrative describing the progress anticipated during the upcoming month, critical activities, delays encountered during the prior month, delays anticipated during the upcoming month, and an audit of the Contract Time. The audit shall show current days allowed by contract, days used through the end of the month, days remaining, percent of time used to date, and percent complete as measured by cost loaded schedule, and days ahead of or behind schedule. In the event that the Contractor was delayed by any occurrence during the prior month, the narrative report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an accounting of days lost or gained.
- H. In the event the monthly update shows the Contractor to be behind schedule (negative float), the narrative shall include a description of actions needed to bring the project back on schedule.

3.05 LOOK AHEAD SCHEDULES

- A. Look Ahead Schedule is a schedule derived from the Contract Schedule (or the most current monthly update of the Contract Schedule) which indicates in detail all activities scheduled or worked on for the 1 prior weeks, and all activities scheduled to occur during the next 3 weeks.
- B. Provide detailed Look Ahead Schedules every week.

- C. Submit in 11-inch by 17-inch Gantt chart format.
- D. Look Ahead Schedule shall be generated from the then current Preliminary Contract Schedule, Contract Schedule, or updated Contract Schedule. Activities listed in the Look Ahead Schedule shall reference the activity identification or other such coding for correlation to the activities listed in the Contract Schedule.

3.06 TIME EXTENSION REQUEST DOCUMENTATION

- A. In the event the Contractor shall request an extension of Contract Time, Contractor shall comply with the requirements of the General Conditions, including without limitation, General Conditions Article 8. In addition to the requirements of the General Conditions, as a condition to obtaining an extension of the Contract Time, Contractor shall timely submit a sub-network of the events of the delay that demonstrates the impact to the activities in the Contractor's then current schedule, as well as the impact to the overall completion date of the project.
- B. If the Owner's Representative approves the extension of time, the next monthly updated Contract Schedule shall incorporate the subnetwork with the extension of time. In addition, the monthly updated Contract Schedule shall contain all changes mutually agreed upon by the Contractor and the Owner during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.

3.07 AS BUILT SCHEDULE

- A. As a condition precedent to the release of retention, the last update of the Contract Schedule submitted shall be identified by the Contractor as the "As Built Schedule". The "As Built Schedule" shall be submitted when all activities are 100 percent complete. The "As Built Schedule" shall reflect the exact manner in which the project was actually constructed (including start and completion dates, activities, sequences, and logic) and shall include a statement signed by the Contractor's scheduler that the "As Built Schedule" accurately reflects the actual sequence and timing of the construction of the project.

3.08 WEATHER DAYS ALLOWANCE

- A. Should inclement weather conditions, or the conditions resulting from weather, prevent the Contractor from proceeding with seventy-five (75) percent of the normal labor and equipment force engaged in the current critical activity item(s), (as shown on the latest CPM Progress Schedule accepted by the Owner's Representative), for a period of at least five (5) hours per day toward completion of such operation or operations, and the crew is dismissed as a result thereof, it shall be a weather delay day.
- B. The expected loss of days specified in the Supplementary Conditions, item 3 "Modification of General Conditions, Article 8 – Contract Time", shall be included in a separate identifiable critical activity labeled "Weather Days Allowance" to be included as the last critical activity of the project schedule prior to substantial or final completion (whichever is contractual). The weather allowance activity shall be on, and remain on, the critical path of the project throughout the life of the project until it has been absorbed. Typically, all activity's leading to completion shall go through the weather allowance activity first. When weather days are experienced, and are approved as such by the Owner's Representative, the Contractor shall either:
 - 1. Increase the duration of the current critical activity(ies) by the number of weather days experienced, or
 - 2. Add a critical activity to the schedule to reflect the occurrence of the weather day(s).

- C. The duration of the weather day allowance activity shall be reduced as weather days are experienced and included in the schedule. Any remaining weather days in the weather day allowance activity at the completion of the project shall be considered as float and shall not be for the exclusive use or benefit of either the Owner or Contractor.
- D. The Contractor shall not receive any additional compensation for unavoidable delays due to inclement or unsuitable weather. If all the weather allowance has been used, any additional weather delay experienced by the Contractor may result in a non-compensable time extension upon submission of acceptable supporting documentation to the Owner's Representative.

END OF SECTION 01 32 00

SECTION 01 33 00

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Administrative requirements for shop drawings, product data and samples submittals
- B. Owner's and Owner's Consultant's review of submittals
- C. Contractor's review of submittals
- D. Shop Drawing Submittals
- E. Product Data submittals
- F. Sample submittals
- G. Field Samples and mock-ups
- H. Submittal Schedule requirements

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK: Subcontractor and materials suppliers list.
- B. Section 013200 – CONTRACT SCHEDULES: Submission and review of schedules and submittals.
- C. Section 014500 – QUALITY CONTROL: Test and Inspection Reports.
- D. Section 016100 - PRODUCT REQUIREMENTS
- E. Section 017700 – CLOSEOUT PROCEDURES: Occupancy/Acceptance /Final Payment Submittals.
- F. Section 017800 – CLOSEOUT SUBMITTALS: Preparation of Maintenance and Operating Data.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. General Submittals Review: Submittals shall be made in accordance with requirements specified herein and in individual Sections.
 - 1. Submittals shall be a communication aid between Contractor, Owner's Representative, and Owner's Consultant(s) by which interpretation of Contract Documents requirements may be confirmed in advance of construction.
 - 2. Submit on all products to be used on the Project. Make all submittals through the Owner unless otherwise directed.

- a. The Owner's Representative shall provide timely review of submittals and re-submittals.
 - 1) Owner's Representative shall have twenty-one (21) days from receipt to review all submittals twenty-one (21) days from receipt to review re-submittals.
 - 2) The Fire Marshal shall have twenty-eight (28) days from receipt to review all submittals twenty-eight (28) days from receipt to review re-submittals.
 - 3) Owner's Representative will prepare and keep a log of review time of all submittals.
 3. Substitutions shall be submitted in accordance with Section 016100 – PRODUCT REQUIREMENTS.
 4. Make submittals sufficiently in advance of construction activities to allow shipping, handling and review by the Owner's Representative and their consultants.
- B. Owner's and Owner's Consultants Review: Owner's Consultant's review will be only for general conformance with the design intent of the Contract Documents. Review of submittals is not conducted for purpose of determining accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. Review actions of the Owner's Consultant or Owner shall not relieve Contractor from compliance with requirements of the Contract Documents. Changes shall only be authorized by separate written Change Order in accordance with the General Conditions of the Contract.
- C. Contractors Review: Contractor shall review, mark-up as appropriate and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittal shall clearly show it has been reviewed by Contractor for conformance with the Contract Documents and for coordination with requirements of the Work. Notify Owner's Representative in writing, at time of submission, of any changes in the submittals from requirements of Contract Documents.

1.04 SUBMITTAL REQUIREMENTS

- A. Prompt Submission: Submittals shall be submitted promptly in accordance with Submittal Schedule and in such sequence as to cause no delay in the Work or in the work of any separate contractor. Present information in a clear and thorough manner to aid orderly review.
- B. Preparation: Title each submittal with the Owner's Project Name and the Owner's Project number, submittal date and dates of any previous submissions. Clearly mark each copy to identify product or model.
1. Identify each item on submittal by reference to Drawing sheet number, detail, schedule, room number, assembly or equipment number, Specification number Reference Standard (such as ASTM or Fed Spec Number) and other pertinent information to clearly correlate submittal with Contract Documents.
 2. Include the names of the Contractor, Subcontractor, Supplier and Manufacturer.

3. Include field dimensions, clearly identified as such to establish relationship to adjacent or critical features of the Work or materials.
4. Include pertinent information such as performance characteristics and capacities, wiring or piping diagrams and controls, catalog numbers and similar data.
5. Modify manufacturer's standard schematic drawings and diagrams and other diagrams to delete information not applicable to the Work. Supplement standard information to provide information specifically applicable to the Work.
6. Identify changes from requirements of the Contract Documents.
7. Include 8" x 3" blank space on face of submittal for review stamps.
8. Include Contractor's review stamp, initialed or signed, and dated, certifying to the review of the submittal, verification of materials, field measurements, conditions, and compliance of the information within the submittal with the requirements of the Work and of the Contract Documents. C. Number of submittals required:
 1. Product Data Submittals: Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
 2. Initial/Re-submitted Shop Drawing Review(s): Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
 3. Final Shop Drawing Review and Approval: After obtaining Owner's Representative approval of initial/re-submitted shop drawing submittals, as described in Section 1.04.C.2 above, Contractor shall submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies. Contractor is responsible for providing all approved shop drawings for its use and use by subcontractors and/or suppliers.
 4. Samples: Submit number specified. Samples shall be of sufficient size and quality to clearly illustrate the functional characteristics of the products, with integrally related parts and attachment devices, including full range of colors, textures and patterns.

D. Identifying Submittals: Identify each submittal by Specification section number followed by a number indicating sequential submittal for that Section. Re-submittals shall use the same number as the original submittal, followed by a letter indicating sequential re-submittal. Examples:

- | | | |
|----|-------------|---|
| 1. | 092500 – 1 | First submittal for Section 092500 – Gypsum Board |
| 2. | 092500 – 2 | Second submittal for Section 092500 – Gypsum Board |
| 3. | 092500 – 2A | Re-submittal of second submittal for Section 092500 – Gypsum Board |
| 4. | 092500 – 2B | Second re-submittal of second submittal for Section 092500 – Gypsum Board |

- E. Resubmission Requirements: Revise and resubmit as specified for initial submittal. Identify any Changes other than those requested. Note any departures from Contract Documents or changes in previously reviewed submittals.
- F. Grouping of Submittals: Unless otherwise specifically permitted by Owner's Representative, make all submittals in groups containing all associated items as described

in each Specification Section. The Owner's Representative will reject partial submittals as incomplete.

G. Unsolicited Submittals: Unsolicited submittals will be returned NOT REVIEWED.

1.05 DISTRIBUTION

A. Reproduce and distribute finalized copies of Shop Drawings and Product Data, to the following:

1. Contractor's Project site file.
2. As-built Documents file maintained by Contractor.
3. Pertinent Separate Contractors.
4. Pertinent Subcontractors.
5. Pertinent Supplier or Manufacturer.

1.06 FIELD SAMPLES AND MOCK-UPS

A. Erect at the project site, at a location directed by Owner's Representative, mock-ups to a size as specified.

1. The following mock-ups are required for this project: As defined in Construction Drawings and Specifications.

B. Fabricate each Sample and mock-up to be complete and fully furnished. Unless otherwise agreed, full-size complete samples will be returned and may be incorporated into field mock-ups and Work.

C. Mock-ups shall be removed by the Contractor at conclusion of the Work at no additional cost to the Owner.

1.07 SUBMITTAL SCHEDULE

A. Submittals Schedule: refer to Section 013200 – CONTRACT SCHEDULES.

1. The Submittal Schedule is a schedule for submission of Shop Drawings, Product Data and Samples by Contractor, and the processing and return of same by Owner.
2. Contractor shall prepare the Submittal Schedule as described herein and coordinate it with the Contract Schedule. No submittals will be processed before the Submittal Schedule has been submitted to and accepted by Owner.
3. Submittal Schedule shall be adjusted to meet needs of construction process and the Contract Schedule. Submit PDF electronic file with booked marked table of contents and/or sheet index of the Submittal Schedule after it is completed and each time it is update by Contractor.
4. Contractor shall NOT begin fabrication or Work which requires submittals until the return of final reviewed and approved submittals have been received by the Contractor.

1.08 ENVIRONMENTAL PRODUCT DECLARATIONS

- A. Contractor must comply with Buy Clean California Act requirements per California Public Contract Code, Sections 3500-3505.
- B. Contractor shall submit to Project Manager/Construction Manager current facility-specific Environmental Product Declaration for each eligible material proposed to be used on the Project.
- C. Environmental Product Declaration (EPD): Type III environmental impact label, as defined by the International Organization for Standardization (ISO) standard 14025, or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance, and integrity.
- D. Eligible Materials: Any of the following:
 - 1. Carbon steel rebar.
 - 2. Flat glass.
 - 3. Mineral wool board insulation.
 - 4. Structural steel.
- E. Eligible Materials installed on the Project by Contractor must comply with any standards to the extent established in the BCCA or by Owner, whichever is more stringent. The facility-specific global warming potential for any Eligible Materials must not exceed any existing maximum acceptable global warming potential for that material pursuant to the BCCA or by Owner, whichever is more stringent ("EM Standards"). The standards are published on the Department of General Services (DGS) website and updated information can be found on this link: <https://www.dgs.ca.gov/PD/Resources/Page-Content/Procurement-DivisionResources-List-Folder/Buy-Clean-California-Act>
- F. Contractor shall not install any eligible materials on the project before submitting a facility-specific Environmental Product Declaration for that material.
- G. This section shall not apply to an eligible material for a particular contract if the Owner determines, upon written justification published on its Internet website, that requiring those eligible materials to comply would be technically infeasible, would result in a significant increase in the project cost or a significant delay in completion, or would result in only one source or manufacturer being able to provide the type of material needed by the state.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 33 00

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Relationship between Code, Ordinances, Standards and Contract Documents
- B. Applicable Codes, Laws and Ordinances
- C. Project Inspections
- D. Lakeport Fire District Fire Marshal Requirements

1.02 RELATED SECTIONS

- A. Section 013500 – SPECIAL PROCEDURES
- B. Section 014200 – REFERENCES
- C. Section 014500 – QUALITY CONTROL

1.03 RELATIONSHIP BETWEEN CODES, ORDINANCES, STANDARDS AND THE CONTRACT DOCUMENTS

- A. Authority: All codes, ordinances and standards referenced in Contract Documents shall have full force and effect as though printed in their entirety in the Contract Specifications.
- B. Precedence:
 - 1. Where specified requirements differ from requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
 - 2. Where Contract Drawings or Contract Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Contract Drawings and Contract Specifications shall take precedence so long as such increase is legal.
 - 3. Where no requirements are identified in Contract Documents, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.04 APPLICABLE CODES, LAWS AND ORDINANCES A.

Building Codes, Laws, and Regulations:

- 1. Work shall meet or exceed the requirements of and be performed in accordance with applicable, adopted code requirements, laws and requirements of all other regulatory agencies, including, but not limited to the following:
 - a. California Code Series - 2022 Edition

- 1) California Administrative Code, California Code of Regulations – Title 24, Part 1
 - 2) California Building Code, California Code of Regulations – Title 24, Part 2, Volume 1& 2
 - 3) California Electrical Code, California Code of Regulations – Title 24, Part 3
 - 4) California Mechanical Code, California Code of Regulations – Title 24, Part 4
 - 5) California Plumbing Code, California Code of Regulations – Title 24, Part 5
 - 6) California Energy Code, California Code of Regulations – Title 24, Part 6
 - 7) Elevator Safety Construction Code, California Code of Regulations – Title 24, Part 7
 - 8) California Historical Building Code, California Code of Regulations – Title 24, Part 8
 - 9) California Fire Code, California Code of Regulations – Title 24, Part 9
 - 10) California Existing Building Code, California Code of Regulations – Title 24, Part 10
 - 11) California Referenced Standards Code, California Code of Regulations – Title 24, Part 12
- b. NFPA Code Series. National Fire Protection Association (NFPA) (as adopted by State agencies)
- 1) NFPA 13 – Standard for the Installation of Sprinkler Systems.
 - 2) NFPA 14 – Standard for the Installation of Standpipe and Hose System
 - 3) NFPA 72 – National Fire Alarm and Signaling Code
 - 4) NFPA 80 – Standard for Fire Doors and Other Opening Protectives
 - 5) NFPA 101 – Life Safety Code
 - 6) NFPA 252 – Standard Methods of Fire Tests of Door Assemblies
 - 7) NFPA 701 – Standard Methods of Fire Tests of Flame Propagation of Textiles and Films
- c. California Code of Regulation Series (embodied in California model codes as noted above)

- 1) Title 8, Industrial Relations
 - 2) Title 17, Public Health (Chapter 7)
 - 3) Title 19, Public Safety
 - 4) Title 21, Public Works
 - 5) Title 22, Social Security
 - 6) Title 24, Parts 1, 2, 3, 4, 5, 9 and 12
 - 7) Title 25, Energy Insulation Standards
- d. Americans with Disabilities Act (ADA) 2010 (Federal Law)
 - e. Rules and regulations of private and public utilities
 - f. American National Standards Institute (ANSI)
 - g. American Society of Testing Materials (ASTM)
 - h. Federal Specifications (Fed. Spec.)
 - i. Underwriters Laboratories
 - j. Traffic controls per California MUTCD requirements
2. All dates to comply with editions adopted and accepted by Owner and Lakeport Fire District (AHJ/FIRE).
 3. Unless otherwise specified, specific references to codes, regulations, standards, manufacturers' instructions, or requirements of regulatory agencies, when used to specify requirements for materials or design elements, shall mean the latest edition of each in effect at the date of submission of bids, or the date of the Change Order, as applicable.
 4. References on Drawings or in Specifications to "code" or "building code" not otherwise identified shall mean the codes specified above, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction having authority over the project. B. Other Applicable Laws, Ordinances and Regulations:
 1. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
 2. Work shall be accomplished in conformance with all regulations of Public Utilities and utility districts.
 3. Where such laws, ordinances, rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to

Contract Time or Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to execution date of the Agreement.

4. General Contractor shall not self-perform specialty contracting work defined in sections 7055 – 7059.1 of the California Business and Professions Code unless the General Contractor has the specialty contractor's license appropriate for the work performed. Otherwise, specialty contractors shall be retained by the contractor to perform specialty work identified in the project scope.

1.05 PROJECT INSPECTIONS

A. Provision of inspectors by Owner, if any, and Information pursuant to this Section and Section 1.04 above shall be subject to the following:

1. Contractor shall allow inspectors full access to Project at all times.
2. Contractor shall not take any direction, approvals or disapprovals from inspectors.
3. Contractor shall not rely on inspectors to ensure Work is completed in accordance with Contract Documents.
4. Acts of omissions of any inspector (including without limitation inspector's failure to observe or report deficiencies in Contractor's Work) shall not relieve Contractor for responsibility to complete Work in accordance with Contract Documents.

1.06 DEFERRED APPROVAL

A. Where noted in the Contract Documents, certain items of materials and/or systems may require deferred approval pending submittals of shop drawings. For these items, Contractor shall submit details and structural calculations for anchorage, to comply with State of California Code of Regulations Title 24, table T17-23-J. Calculations shall be made by a licensed Structural Engineer registered in the State of California.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 41 00

SECTION 01 42 00

REFERENCES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Definitions and terms used in Contract Documents
- B. Reference Standards used in Contract Documents
- C. Common abbreviations and acronyms which may be used in Contract Documents

1.02 RELATED SECTIONS

- A. Section 014100 – Regulatory Requirements

1.03 DEFINITIONS OF TERMS

- A. Basic Contract Definitions: Words and terms governing the Work are defined in the General Conditions of the Contract, provided in the Contract Documents.
- B. Additional words and terms are used in the Drawings and Specifications and are defined as follows:
 - 1. Applicable: As appropriate for the particular condition, circumstance or situation.
 - 2. Approve (d): Used in conjunction with action on submittals, applications, and requests, is limited to duties and responsibilities stated in the General Conditions. Approvals shall only be valid if obtained in writing and shall not apply to matters regarding the means, methods, techniques, sequences and procedures of construction. Approval shall not release Contractor from responsibility to fulfill Contract requirements.
 - 3. And/or: If used, shall mean that either or both items so joined are required.
 - 4. By others: Work on the project that is outside the scope of Work to be performed under the Contract, but that will be performed by Owner, separate contractors or other means.
 - 5. Contractor-Furnished/Owner-Installed (CFOI): Items, systems or equipment purchased by the Contractor as part of the project and handed over to the Owner for installation.
 - 6. Construction Site: Same as site.
 - 7. Directed: As instructed by Owner or Owner's Representative, in writing, regarding matters other than the means, methods, techniques, sequences and procedures of construction. Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by Owner's Representative", requested by Owner's Consultant" or Owner's Representative and similar phrases. No implied meaning shall be interpreted to extend the Owner's Representative responsibility into Contractor's supervision of construction.

8. Equal or Equivalent: As determined by the Owner's Consultant as being of the same quality, appearance, utility, durability, finish, function, suitability, and performance.
9. Furnish: Means "supply and deliver, ready for unloading, unpacking, assembly, installation, and similar operations".
10. Indicated: Refers to graphic representations, notes or schedules on Drawings, or Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used, it is to help locate the reference.
11. Install: Describes operations at the site including unloading, unpacking, assembly, erection, anchoring, applying, working to dimension, protecting, cleaning, and similar operations.
12. Installer: "Installer" is the ~~Contractor~~Contractor, or an entity engaged by the Contractor, as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - a. Experienced Installer: The term "experienced", when used with "installer" means having a minimum of five (5) previous Projects similar in size to this Project, and familiar with the precautions required, and with requirements of the authority having jurisdiction.
13. Jobsite: Same as site.
14. Necessary: as determined in the professional judgement of the Owner Representative through the Owner's Consultant as being necessary for the Work, in conformance with the requirements of the Contract Documents, and excluding

matters regarding the means, methods, techniques, sequences and procedures of construction.
15. Noted: Same as indicated.
16. Owner-Furnished/Contractor-Installed (OFICI): Item, system or equipment furnished by Owner at its cost and installed by the Contractor as part of the Work.
17. Per: In accordance with or in compliance with.
18. Products: Materials, systems or equipment.
19. Project site: Same as site.
20. Proper: As determined by the Owner's Representative as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, which are solely the Contractor's responsibility to determine.
21. Provide: Means "furnish and install, complete and ready for use".
22. Regulation: Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, and rules, conventions and agreements within the construction industry

that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.

23. Required:
 - a. As required by regulatory requirements of governing authorities.
 - b. As required by referenced standards.
 - c. As required by existing job conditions.
 - d. As generally provided by accepted construction practices of the locale.
 - e. As indicated on the Drawings and in the Specifications.
 - f. As otherwise required by the Contract Documents.
24. Scheduled: Same as indicated.
25. Selected: As selected by Owner's Representative or Owner's Consultant from the full national product selection of the manufacturer, unless otherwise specifically limited in the Contract Documents to a particular quality, color, texture or price range.
26. Shown: Same as indicated.
27. Site: Same as Site of the Work or Project Site; the area or areas or spaces occupied by the Project and including adjacent areas and other related areas occupied or used by the Contractor for construction activities, either exclusively or with others performing other construction on the Project. The extent of the

Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.
28. Testing Laboratories: Same as Testing and Inspection Agency.
29. Testing and Inspection Agency: An independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.
30. Owner-Furnished/Contractor-Installed (OF CI): Same as Owner-Furnished/Contractor-Installed.

1.04 REFERENCE STANDARDS

- A. References: The Drawings and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests, and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual Sections of the Specifications.
- B. Relationship to Drawings and Specifications: Such references are incorporated into and made a part of the Drawings and Specifications to the extent applicable.
- C. Referenced grades, Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified in the Drawings or Specifications, provide the highest, best and greatest of the alternatives or options for the intended use and prevailing conditions.
- D. Copies of Reference Standards:
 - 1. Reference standards are not furnished with the Drawings and Specifications. It is the responsibility of the Contractor, subcontractors, manufacturers, suppliers, trades and crafts to be familiar with these generally recognized standards of the construction industry.
- E. Jobsite Copies:
 - 1. Contractor shall obtain and maintain at the Project site copies of reference standards identified on the Drawings and in the Specifications in order to properly execute the Work.
- F. Edition Date of References:
 - 1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of the Contract.
 - 2. All amendments, changes, errata, and supplements as of the effective date shall be included.
- G. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is the responsibility of the Contractor to be familiar with and have access to these nationally, and industry recognized specifications and standards.

1.05 ABBREVIATIONS & ACRONYMS

- A. Abbreviations and Names: Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable.
- B. Refer also to the "Encyclopedia of Associations", published by Gale Research Co., available in most libraries.
- C. The following are commonly used abbreviations which may be found on Contract Drawings and in Contract Specifications:

AA	Aluminum Association
AAA	American Arbitration Association
AAC	Architectural Anodizers Council
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ACPA	American Concrete Pumping Association
ADA	Americans with Disabilities Act
ADC	Air Diffusion Council
AFSA	American Fire Sprinkler Association
AGA	American Galvanizers Association (formerly AHDGA)
AGA	American Gas Association
AGC	Associated General Contractors of American
AI	Asphalt Institute
AIA	American Institute of Architects
AIMA	Acoustical and Insulation Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association International
ANSI	American National Standards Institute
APA	Engineered Wood Association (formerly American Plywood Association)
APWA	American Public Works Association
ARMA	Asphalt Roofing Manufacturers Association
ASAC	American Subcontractors Association of America
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASPE	American Society of Plumbing Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BOC	Board of Corrections
CABO	Council of American Building Officials
CAC	California Administrative Code (see California Code of Regulations (CCR))
CAL/OSHA	State of California Construction Safety Orders
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Electrical Code
CFC	California Fire Code
CFR	Code of Federal Regulations
CIMA	Construction Industry Manufacturers Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers' Institute
CMC	California Mechanical Code
CPC	California Plumbing Code
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
CTIOA	Ceramic Tile Institute of America, Inc.
DHI	Door and Hardware Institute
DSA	Division of the State Architect
EJMA	Expansion Joint Manufacturers Association
FGMA	Flat Glass Marketing Association
FM	Factory Mutual Research Organization
FS	Federal Specification (from GSA)
GA	Gypsum Association
GSA	General Services Administration
HCAI	Department of Health Care Access and Information (State of California)
IAPMO	International Association of Plumbing and Mechanical Officials
IEEE	Institute of Electrical and Electronics Engineers, Inc.
ISO	International Organization for Standardization

MIA	Masonry Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MM	State of California, Business and Transportation Agency, Department of Transportation, "Materials Manual"
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NEC	National Electrical Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NFSA	National Fire Sprinkler Association
NGA	National Glass Association
NIBS	National Institute of Building Sciences
NIST	National Institute of Standards and Technology
NPCA	National Precast Concrete Association
NRCA	National Roofing Contractors Association
NSC	National Safety Council
NSF	National Sanitation Foundation
NSPE	National Society of Professional Engineers
NTMA	National Terrazzo and Mosaic Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing and Drainage Institute
PS	Product Standard (U.S. Department of Commerce)
RIS	Redwood Inspection Service
SDI	Steel Deck Institute
SFM	State Fire Marshal (California)
SFPE	Society of Fire Protection Engineers
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Society for Protective Coatings (Steel Structure Painting Council)
SSPWC	Standard Specifications for Public Works Construction
SWRI	Sealant, Waterproofing and Restoration Institute
TCA	Tile Council of America
TJC	The Joint Commission
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USS	United States Standard
WCLIB	West Coast Lumber Inspection Bureau
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

- D. Words and terms not otherwise specifically defined in this Section or in the Contract Documents, shall be as customarily defined by trade or industry practice, by reference standard and by specialty dictionaries such as Dictionary of Architecture and Construction (Cyril M. Harris, McGraw-Hill Educational; 4th Edition, September 5, 2005). E. Additional abbreviations, used on the Drawings, are listed thereon.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 42 00

SECTION 01 45 00

QUALITY CONTROL

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Contractor's Quality Control
- B. Quality of the Work
- C. Inspections and tests by governing authorities
- D. Inspections and tests by serving utilities
- E. Inspections and tests by manufacturer's representatives
- F. Inspections and Independent testing and Inspection Laboratories/Agencies
- G. Contractor's responsibilities in inspections and tests
- H. Contractor's responsibilities regarding the Owner's testing laboratory
- I. Test reports
- J. Geotechnical engineer

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 014100 – REGULATORY REQUIREMENTS: Compliance with applicable codes, ordinances and standards.
- C. Section 014550 – INSPECTION and TESTING of WORK
- D. Section 016100 – PRODUCT REQUIREMENTS: Product Options, substitutions, transportation and handling requirements, storage and protection requirements, and system completeness requirements.

1.03 CONTRACTOR'S QUALITY CONTROL

- A. Contractor's Quality Control: Contractor shall ensure that products, services, workmanship and site conditions comply with requirements of the Contract Documents by coordinating, supervising, testing and inspecting the Work and by utilizing only suitably qualified personnel.
- B. Quality Requirements: Work shall be accomplished in accordance with quality requirements of the Contract Documents, including, by reference, all Codes, laws, regulations and standards. When no quality basis is prescribed, the quality shall be in accordance with the best-accepted practices of the construction industry for the locale of the Project, for projects of this type.

- C. Quality Control Personnel: Contractor shall employ and assign knowledgeable and skilled personnel as required by contract or necessary if not prescribed to perform quality control functions to ensure the Work is provided as required.

1.04 QUALITY OF THE WORK

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.
- B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements and adjacent construction.
- C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling and staining, until Acceptance by Owner.
- D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report (ICC) requirements in preparing, fabricating, erecting, installing, applying, connecting and finishing Work.
- E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviation is acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by Owner's Representative and Owner's Consultant in accordance with provisions of the General Conditions of the Contract.
 - 1. Contractor shall cooperate by making Work available for inspection by Owner's Representative, Owner's Consultant or their designated representatives.
 - 2. Such verification may include mill, plant, shop, or field inspection as required.
 - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured, fabricated or stored.
 - 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by Owner's Representative or Owner's Consultant.
 - 5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the General Conditions of the Contract.
- G. Observations by Owner's Consultants: Periodic and occasional observations of the Work in progress will be made by Owner's Consultant and their consultants as deemed necessary to review progress of Work and general conformance with design intent.
- H. Limitations on Inspections, Tests and Observations: Neither employment of independent testing and inspection agencies nor observations by Owner's Consultant and their consultants shall relieve

Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents.

- I. Acceptance and Rejection of Work: Owner's Representative reserves the right to reject all Work not in conformance to the requirements of the Contract Documents.
 - 1. If initial tests or inspections made by Owner's Testing Laboratory or Geotechnical Engineer reveal any portion of the Work fails to comply with Contract Documents, or if it is determined that any portion of Work requires additional testing or inspection, additional tests and inspections shall be made as directed by Owner's Representative.
 - 2. If such additional tests or inspections establish such portions of the Work comply with Contract Documents, all costs of such additional testing or inspection will be paid by Owner.
 - 3. If such additional tests or inspections establish such portions of the Work fail to comply with Contract Documents, all costs of such additional tests and inspection shall be deducted from the Contract sum.
- J. Correction of Non-conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by Contractor at no change in the Contract Sum or Contract time.
- K. Acceptance of Non-Conforming Work: Acceptance of non-conforming Work, without specific written acknowledgement and approval of Owner shall not relieve Contractor of the obligation to correct such Work.
- L. Contract Adjustment for Non-conforming Work: Should Owner or Owner's Consultants determine it is not feasible or in Owner's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between Owner and Contractor. If equitable reduction in Contract Sum cannot be agreed upon, a Directed Change Order will be issued and the amount in dispute resolved in accordance with applicable provisions of the General Conditions of the Contract.

1.05 INSPECTIONS AND TESTS BY GOVERNING AUTHORITIES

- A. Regulatory Requirements for Testing and Inspection: Comply with California Building Code (CBC) requirements and all other requirements of governing authorities having jurisdiction.
- B. Inspections and tests by governing Authorities: Contractor shall cause all tests and inspections required by governing authorities having jurisdiction to be made for Work under this Contract.
 - 1. Such authorities include Owner's Building Inspection (code compliance), Fire Marshal's office and similar agencies.

1.06 INSPECTIONS AND TESTS BY SERVING UTILITIES

- A. Inspections and Tests by Serving Utilities: Contractor shall cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

1.07 INSPECTIONS AND TEST BY MANUFACTURER'S REPRESENTATIVES

- A. Inspections and Tests by Manufacturer's Representatives: Contractor shall cause all tests and inspections specified to be conducted by materials or systems manufacturers, to be made. Additionally, all tests and inspections required by materials or systems manufacturers as condition of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum. Manufacturer's Representatives shall provide a PDF electronic report indicating but not limited to work or materials that are missing, not installed correctly, damaged or need correction. Manufacturer's Representatives shall issue a final PDF electronic report once all work and materials are installed correctly, functioning and in compliance with the Manufacturer's Warranty.

1.08 INSPECTION BY INDEPENDENT TESTING AND INSPECTION LABORATORIES A.

Definitions:

1. The term "Owner's Testing Laboratory" means a testing laboratory retained and paid for by Owner for the purpose of reviewing material and product reports, performing material and product testing and inspection, and other services as determined by Owner.
- B. Owner will select an independent testing and inspection laboratory or agency to conduct tests and inspections as called for in the Contract Documents and as required by governing authorities having jurisdiction.
1. Responsibility for payment for tests and inspection shall be as indicated in the schedule below. All time and costs for Contractor's services related to such tests and inspections shall be included in Contract Time and Contract Sum.
- C. Contractor shall notify Owner, and if directed by Owner's Representative testing and inspection laboratory, when Work is ready for specified tests and inspections.
- D. Contractor shall pay for all additional charges by testing and inspection agencies and governing authorities having jurisdiction due to the following:
1. Contractor's failure to properly schedule or notify testing and inspection agency or authority having jurisdiction.
 2. Changes in sources, lots or suppliers of products after original tests or inspections.
 3. Changes in means, methods, techniques, sequences and procedures of construction that necessitate additional testing, inspection and related services.
- E. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design. Test and inspections shall include, but not be limited to, the following:

List the applicable services required, for example:

Material Inspections and Tests		Paid by:
Concrete Reinforcement	Reinforcement Inspection	Owner
	Reinforcement Strength	Owner
Cast in Place	Slump Tests	Owner
	Compressive Strength Tests	Owner
Structural Steel	Welding Inspection	Owner
	High Strength Bolting Inspection	Owner

- F. Test and Inspection Reports: After each inspection and test, one (1) PDF electronic report shall be promptly submitted to Owner's Representative, Contractor and to agency having jurisdiction (if required by code).

1. Reports shall clearly identify the following:
 - a. Date issued
 - b. Project name and Project number
 - c. Identification of product and Specification Section in which Work is specified
 - d. Name of inspector
 - e. Date and time of sampling or inspection was conducted
 - f. Location in Project where sampling or inspection was conducted
 - g. Type of inspection or test
 - h. Date of tests
 - i. Results of tests
 - j. Comments concerning conformance with Contract Documents and other requirements
2. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
3. Samples taken but not tested shall be reported.
4. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
5. When requested, testing and inspection agency shall provide interpretations of test results.
6. Verification reports shall be prepared and submitted, stating tests and inspections specified or otherwise required for Project, have been completed and material and workmanship comply with the Contract Documents. Verification reports shall be submitted at intervals not exceeding six (6) months, at Substantial Completion of the Project, and at all times when Work of Project is suspended.

1.09 CONTRACTOR RESPONSIBILITIES IN INSPECTIONS AND TESTS

- A. Tests, inspections and acceptances of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Except as otherwise provided, Contractor shall notify Owner's Representative to make arrangements for such tests, inspections and acceptances. Contractor shall give Owner's Representative timely notice of all required inspections as outlined in Specification Section 014550 – INSPECTION and TESTING of WORK, Item 1.05, Scheduling Inspections – Notification Requirements.

- B. If such procedures for testing, inspection or acceptance reveal failure of any portion of the Work to comply with requirements of the Contract Documents, Contractor shall bear all costs made necessary by such failure including those of repeated procedures, including compensation for Owner's Consultant's services and expenses.
- C. If Owner and/or Owner's Consultants are to observe tests, inspections or make acceptances required by the Contract Documents, Owner and/or Owner's Consultant will do so promptly and, where practicable, at the normal place of testing.
- D. Cooperate with testing and inspection agency personnel, Owner, Owner's Consultant's and their consultants. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.
- E. Provide incidental labor and facilities to provide safe access to Work to be tested and inspected, to obtain and handle samples at the Project site or at source of products to be tested, and to store and cure test samples.

1.10 CONTRACTOR RESPONSIBILITIES REGARDING OWNER TESTING LABORATORY

- A. Secure and deliver to Owner's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.
- B. Submit to Owner's Representative the preliminary design mixes proposed for concrete and other materials, which require review, by Owner's Consultants and/or Owner's Testing Laboratory.
- C. Submit copies of product test reports as specified.

1.11 TEST REPORTS

- A. Owner's Testing Laboratory shall submit one (1) PDF electronic copy of all reports to the Owner's Representative, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

1.12 Owner will distribute one (1) PDF electronic copy of the reports to Owner's Consultants and Contractor.
GEOTECHNICAL ENGINEER

- A. Owner will retain and pay the expense of a Geotechnical Engineer to perform inspection, testing and observation functions specified by Owner. Geotechnical Engineer will communicate only with Owner. Owner's Representative shall then give notice to Contractor, of any action required of Contractor.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 45 00

SECTION 01 45 50

INSPECTION AND TESTING OF WORK

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Project Inspections and Procedures
- B. Scheduling Inspectors – Notification requirements

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013500 – SPECIAL PROCEDURES
- D. Section 014100 – REGULATORY REQUIREMENTS
- E. Section 014500 – QUALITY CONTROL

1.03 DEFINITIONS

- A. IOR: Inspector-of-Record
- B. FM: Fire Marshal
- C. TL: Testing Laboratory

1.04 PROJECT INSPECTIONS AND TESTING PROCEDURES

- A. Inspections: The following inspections will be requested on this project, as appropriate. Also see Part 3 for additional inspection items or Part 3
 - 1. Inspections required by the California Building Code
 - 2. Inspections listed on the Testing, Inspection and Observation (TIO) form
 - 3. Final inspections
- B. Procedures: Owner's Representative shall be the Contractor's contact for all inspection requests. Contractor shall fill out Inspection Request Form for all inspections.
 - 1. Contractor shall properly plan and coordinate inspection requests. Schedule delays caused by Contractor's failure to plan and/or coordinate inspection requests will not be considered for adjustments to Contract Time or Contract Sum.
 - 2. A complete set of stamped and approved Contract Drawings and Contract Specifications, including applicable shop drawings and building permit shall be available on site for review

by the Inspector-of-Record. The Contractor, Subcontractors and other responsible parties shall be present during inspection walkthroughs. All areas of project scope shall be ready and accessible for inspection. Contractor shall provide access equipment as applicable for the inspector's needs.

3. A complete set of codes referred to in the approved plans must be maintained on the job at all times.
4. Contractor shall submit verified compliance reports as outlined in the California Administrative Code, Section 7-151.

1.05 SCHEDULING INSPECTIONS –NOTIFICATION REQUIREMENTS

- A. Advance Inspection Notification: Owner's Representative for this project requires the following advance notifications to schedule appropriate inspection agencies at the project site.
 1. IOR Inspection Request Notification: Twenty-four (24) hours. Note: Inspection requests received by 2:00 PM will be scheduled for next day inspection. Inspection requests received after 2:00 PM will be scheduled for the following day; (example: Inspection request received at 2:01 PM on a Monday would be scheduled for inspection on Wednesday). Weekend and off-hours inspection requests will be scheduled on a case-by-case basis with a minimum of seventy-two (72) hour inspection request notification.
 2. Testing Laboratory Inspections: Forty-eight (48) hours.
 - a. All testing laboratory and testing procedures must be scheduled by Owner's Representative. Inspections and/or testing directly scheduled by Contractor will not be accepted.
 - b. Contractor will bear all costs associated with unauthorized inspections and testing.
 3. Fire Marshal Inspection Request Notification: Seventy-two (72) hours.
- B. Methods of Inspection Notification:
 1. All inspection notifications shall be in writing using inspection forms located at back of this Section. Incomplete forms will be returned as non-compliant, and no inspection will be scheduled until all required inspection information is provided.
 2. Emailed inspection requests will be accepted. Owner's Representative email address is Joseph.Cooper@lakecountycal.gov Notification time begins from the date and stamp of the email, provided it is sent during normal business hours. Emailed inspection requests sent after normal business hours and/or received on non-normal workdays, as defined in Specification Section 013100 – COORDINATION, paragraph 1.07.F.4.A will begin notification time starting at 7:00 AM the following normal business day.
- C. Off-hours Inspection Requests: Contractor shall provide time windows for all off-hour or other than normal work hour inspections. Owner's Representative shall have final authority in setting times of off-hour inspections.
- D. Re-inspections:

1. More than two (2) re-inspections: The cost of re-inspections of the same work, more than twice, shall be deducted from Contract Sum. Owner will provide itemized invoice for Contractor's records.
2. Work unprepared for inspection: Re-inspections of the same work scheduled by Contractor, but not ready for inspection will be identified as a re-inspection.

PART II - PRODUCTS – Not Applicable to this Section.

PART III - EXECUTION

Note: Part 3 describes typical inspection requirements for each individual inspector's jurisdiction for non-HCAI projects. Part 3 is provided as a reference source for Contractor's use and Scheduling, as applicable. Part 3 is not intended to be all-inclusive and Contractor shall verify actual inspection requirements needed for this project. FIRE DAMPERS (Title 24, Part 2, Chapter 43) Note: Manufacturer's installation instructions shall be used for inspections and testing. A. 1 Hour: IOR test 100%. Fire Marshal tests 100% or as needed.

B. 2 Hour: IOR tests 100%. Fire Marshal tests 100%.

C. Smoke: IOR tests 100%. Fire Marshal tests 100%.

3.02 FIRE SPRINKLERS (Title 24, Part 2, Volume 1, Chapter 9; NFPA Bulletin 13) A.

Approved drawings shall be on jobsite from start to completion of project.

B. Underground pressure test @ 200 psi.

C. Fire Marshal to witness installation of underground lines.

D. Fire Marshal to witness underground flush prior to connection.

E. Hydro-test above ground piping @ 200 psi for two (2) hours.

F. Inspection of hangers, bracing, and seismic joint crossing(s).

G. Flow alarm test, tamper switch test.

H. Fire pump test.

I. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).

J. Final inspection: signs in place, labeling, fire extinguishing system flow alarm test.

3.03 FIRE ALARM SYSTEM (Title 24; Part 9, Article 1006)

Note: Fire Sprinkler and Fire Alarm systems tests shall be performed in presence of Fire Marshal. A.

Approved drawings shall be on jobsite from start to completion of project.

B. Verify Emergency Power source.

- C. Activate all initiating devices.
 - D. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).
 - E. Complete test of system per Title 24, Part 9, CFC, Article 1003.3.4.1).
- 3.04 MEANS OF EGRESS (Title 24, Part 2, Volume 1, Chapters 10)
- A. Exit sign/light locations and connected to two (2) sources of power.
 - B. Normal Power.
 - C. Emergency Electrical System, Life Safety Branch.
 - D. Construction - floors, walls, ceilings, penetrations per listings.
 - E. Electrical boxes - no back to back, 24 inches horizontal separation (Section 709).
 - F. Electrical boxes - 100+ square inches to be wrapped/protected.
 - G. Flame Spread, Fuel Contribution and Smoke Density for finishes (Chapter 8).
- 3.05 EMERGENCY LIGHTING
- A. Generator Test (Title 24, Part 3, Section 700-4; Section 701-5).
 - B. Emergency lights - locations (Title 24, Part 2, Volume 1, Chapter 10, Section 1003.2.8.5).
- 3.06 MECHANICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 4) A.
- Mechanical Equipment Requirements
- 1. Access to Equipment (Section 305, 405, 606.5, 815, 2.2.8, 903, 910.8, 1106.3).
 - 2. Labeling of Equipment (Section 307).
 - 3. Identification of Equipment - Area or Space Served (Section 304.5).
- B. Mechanical Testing
- 1. Air balance completed and reviewed by Mechanical Engineer-of-Record.
 - 2. Hydronic balance completed and reviewed by Mechanical Engineer-of-Record.
 - 3. Air and Hydronic reports forwarded to Mechanical Engineer of Record.
 - 4. Fuel Gas line inspection (Part 4, Section 1406 and Appendix B, Chapter 16).
- C. Boilers
- 1. Boiler – Operating Adjustments and Instructions (Section 1022).
 - 2. Boiler – Inspections and Tests (Section 1023).

3. Boiler – Clearances/Permits (Section 1005.0).

D. Ducts

1. Installation - Bracing (Part 4, Section 604.1.4)
2. Fire Damper test log from IOR (Part 4, Section 606.2).
3. Fire Damper test by Fire Marshal (Part 4, Chapter 6, Section 606.2).
4. Smoke Damper and Detector test log from IOR (Including Duct Detector tests).
5. Smoke Damper and Detector by Fire Marshal.

E. HVAC Unit Testing

1. Verify correct filter types and efficiencies.
2. Motor Rotation.
3. Condensate drain tests (Section 310).
4. Equipment shut down by smoke detectors (duct or space).

3.07 PLUMBING CHECKLIST FOR CLOSE-OUT (Title 24; Part 2, Chapter 29; Part 5)

A. Piping Systems (Title 24, Part 5)

1. Domestic Water Line Sterilization Test (Title 24, Part 2, Section 609.9; Title 22, Division 4, Chapter 16, Article 5).
2. Domestic Water System (hot, cold) Pressure test (Title 24, Part 5, 609.4).
3. Natural Gas Pressure Test (Title 24, part 5, Chapter 12, Section 1204).
4. Vent & Waste System Pressure test (Title 24, Part 5, 712.0).
5. Hydronic Water Pressure test (Title 24, Part 4 1201.2.8).

B. Water Heater Testing

1. Water Heater Temperature Test (Domestic).

3.08 ELECTRICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 3, and Part 1, Chapter 7, Section 7- 141, 7-149)

A. Main Panel/Service

1. Identification and Labeling of Equipment (110-21, 110-22, 230-70).
2. Grounding test and Certification (250, 250-56).
3. Ground fault interrupt test adjustment and certification [230-95(c); 517-17(c)].
4. Emergency power transfer switch test (700-4).

5. Panel load balance.
- B. Emergency Power and Standby Systems (Article 700 & 701) [Test Logs from IOR]
 1. Emergency Generator testing and certification (701-5).
 2. Identification and Labeling of equipment (110-21, 110-22, 517-22).
 3. Lighting and Lighting Levels (517-22).
 4. Receptacles (410L, 517-13, 517-18, 517-19).
 5. Exiting signs and lights [517-32(b), 517-42(b)].
 6. Fire Alarm (760).
- C. General Electrical Requirements
 1. Working space/Headroom [Table 110-26(a); 110-33; 110-34].
 2. Circuits and lights tested (410-45).
 3. Receptacle polarity and grounding [200-10(b)].
 4. Isolated ground monitor test [517-160(b)].
 5. Motor load current adjustment.
 6. Identification and Labeling of equipment (110-21; 110-22).
 7. Identify circuits (517-19).
- D. Miscellaneous Electrical Requirements
 1. Test logs from Contractor and Inspector-of-Record.
 2. Electrical Engineer-of-Record acceptance of system.
 3. Owner In-Service training on Equipment.
 4. Equipment Manuals and Instruction to Owner.
 5. Warrantees and Equipment Certification.
 6. As-Built documents to Owner.

3.09 FIRE MARSHAL INSPECTION REQUIREMENTS A.

Framing Inspections

1. Structural members in fire-resistive construction.
2. Check fireproofing per approved design tested assembly description.

B. Fire-Rated Partition Locations

1. Check for stud and nailing/screwing spacing per approved design tested assembly description.
2. Check for fire blocking in combustible construction.
3. Check for rated door/window frame installation (manufacturer's installation instructions shall be available for review).
4. Check for electrical installation, for example, number and size of electrical boxes, panels, cabinets, etc.
5. Check hangers, seismic bracing for sprinkler piping installation, if applicable (this would be checked during overload pressure test inspection phase of sprinkler system).

Close-In

Inspections

1. Check fire-blocking and draft stops in combustible construction.
2. Check gypsum board installation in accordance with approved design assembly description for rated assembly.
3. Check integrity of firewall construction where recessed cabinets, panels, excessive electrical/plumbing are installed.

4. Check fire damper installation (manufacturer's installation instructions shall be available for review). Fire Marshal will witness actuation of minimum 10% fire dampers installed and 100% in 2 hour or greater fire rated wall assemblies.
5. Check for through-penetrations and fire-stop systems in all walls or floor/ceiling assemblies.
 - a. Check top of wall to structure fire stopping.
6. Check above ceiling areas and construction prior to installation of ceilings.
 - b. Check access and serviceability for above ceiling to included but not limited to valves, mechanical equipment, electrical equipment and other components that require adjustment, access or service.
 - c. Contractor shall move any items including but not limited to conduit, piping, braces and other obstructions that block access to equipment and components needing adjustment, access or service.
 - d. Check bracing, anchorage, fasteners and installation.

D. Final Construction Inspections

1. Final project walk-through: Example, Emergency lighting will be tested to verify exit illumination of both interior and exterior, while generator (if applicable) is tested at same time.

3.10 Refer to the following attachment.

- A. Inspection Request
- B. Non-conforming Work Notice

END OF SECTION 01 45 50

INSPECTION REQUEST

Project

[Contractor] [Design-

#: Inspection #: IR #: _____
ProjectBuilder] IR Date:
#: _____Spec Section
(s):

Name: _____

To: LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

Project Manager

Joseph Cooper

Email: Joseph.Cooper@lakecountycal.gov

P:

E-mail:

Drawing Ref.: _____

Detail: _____

Shop Drawing:

Project Schedule Activity ID No.: _____ Date of Inspection: _____

Time Requested:

Type of Inspection: _____

Location of Inspection (i.e., Floor, Column Line,
etc.): _____

*Re-inspection Requested for Previous IR #: _____

All work Requested for Inspection has been reviewed for compliance with the contract documents by [Contractor][Design- Builder]'s
Superintendent prior to notification of Inspection Request.

Signed: _____ Date: _____

OWNER USE ONLY

Date Received: _____ Time of Inspection: _____

Date of Inspection: _____ Inspector: _____ ☐ Inspection Report Attached

Inspector Arrival Time: _____ Inspector Departure Time: _____

Comments:

☐Approved
☐Approved as Noted
☐Not Approved
☐Cancelled

Inspection Request Notes or Description of Items of Deficiency if needed below (Part 1, Chapter 7, Section 7-145, item 6)

Project Field Record of Construction Progress Summary of Work in Progress (Part 1, Chapter 7, Section 7-145, item 6)	
Project Phase (Building Foundation, Structural, Wall Framing, Electrical Rough-In, Sprinkler Rough-In, etc.)	
Project Phase Percentage Complete (% of the phase completed):	Overall Project Percentage Complete:

NON-CONFORMING WORK NOTICE

PROJECT NAME:

JOB #:

Notice #:

Date:

To: [PROJECT MANAGER NAME/EMAIL] _____	From: IOR _____
[DESIGN PROFESSIONAL NAME/EMAIL] _____	
[PROJECT #, AREA COMPLIANCE OFFICER/EMAIL] _____	

Spec Section Ref.:

Paragraph: _____

Drawing Ref.: _____

Detail: _____

In accordance with Article 12 of the General Conditions, the following defective condition(s) has/have become apparent:

Reported by:

CORRECTIVE ACTION SHOULD BE TAKEN AS SOON AS POSSIBLE AND COMMENCE NO LATER THAN TEN (10) CALENDAR DAYS AFTER THIS NOTICE. COORDINATE THE VERIFICATION OF THE CORRECTIVE ACTIONS WITH THE INSPECTOR OF RECORD. IF FURTHER INFORMATION IS

NEEDED, ADVICE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH THE GENERAL CONDITIONS.

Description of corrective action taken: ____

Accepted by: _____ Date: _____

CC:

SECTION 01 51 00

TEMPORARY UTILITIES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Temporary Power and Lighting.
- B. Temporary Heating, Cooling & Ventilation.
- C. Temporary Water.
- D. Temporary Fire Protection.
- E. Temporary Telephone, Data, and WIFI.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and controls, to accommodate the Owner's occupancy and use of the areas and spaces adjacent to construction.
- C. Section 017400 – CLEANING
- D. Section 017700 – CLOSEOUT PROCEDURES

1.03 TEMPORARY UTILITIES

- A. Temporary Connections: Temporary power, water, sewer, gas and other utility services necessary for the Work may be made to existing building systems. Connections shall be subject to Owner's review and written approval. Coordinate with utility companies and Owner's Plant Operations & Maintenance Department for locations and methods of connections.
- B. Contractor shall provide and pay for installation, operation, maintenance, and removal of all utilities. The services will be provided at the current rates for each utility.

1.04 TEMPORARY POWER AND LIGHTING A.

Service Requirements:

- 1. Temporary Electrical Service: Contractor shall provide and pay for installation, operation, maintenance, and removal of temporary electrical service, lighting devices and restoration of existing and permanent equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California. Use of Owner's electrical power and lighting system is prohibited without Owner's written approval and will be considered only when an alternate electrical power source is unavailable.

- a. Install initial services at time of site mobilization.

- b. Modify and extend systems as Work requires.
 - c. Maintain electrical system to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
 - d. Restore existing and permanent lighting used during construction to original condition. Replace defective fixtures, bulbs, and other component parts.
 - e. Clean existing and permanent lighting fixtures used during construction per Section 017400 – CLEANING.
 - 2. Distribution: Contractor shall provide distribution network for temporary electrical power.
 - 3. Power Source: Arrange for service with Owner's Plant Operations and Maintenance Department, or local utility company.
 - 4. Conformance: All temporary wiring and electrical facilities shall be in accordance with applicable provisions of Electrical Safety Orders of the State of California.
 - 5. Temporary Lighting: Construction lighting shall be supplied and maintained by Contractor at Contractor's expense. Sufficient lighting levels shall be provided to allow construction to be properly and safely performed. Contractor shall give special attention to adequate lighting for stairs, ladders, floor openings, basements and similar spaces. Promptly replace burnt out, worn or defective parts.
 - 6. Lighting fixtures: Locate fixtures in areas of Work: One (1) lamped fixture in rooms, except closets and utility chases; one (1) lamped fixture for every 750 square feet in large areas.
 - 7. Security Lighting: Contractor shall provide security lighting during hours of low visibility.
- B. Distribution requirements:
- 1. Weatherproof distribution boxes with one (1) - 240-volt, three (3) phase power outlet and four (4) – 120-volt outlets consisting of 100 amperes fused switches with equipment ground, spaced so a 100-foot extension cord will reach all areas of building.
 - 2. Wiring, connections and protection for temporary lighting.
 - 3. Wiring connections and protection for temporary and permanent equipment, for environmental control, for temporary use of electricity operated equipment, and for testing.
- C. Use of Owner System: If alternate electrical power and lighting sources are unavailable, Owner may permit Contractor to use existing, in-place electrical system. Owner does not guarantee availability of electrical power or adequate lighting levels through use of existing system. If power and lighting is insufficient or not available Contractor shall provide secondary source (i.e., generator) as approved by Owner.

1. It is expressly understood and agreed by Contractor that Owner existing power and lighting system's primary obligation is servicing patient care. The Owner system is not designed for purposes of construction activities.
2. Contractor should expect power and lighting interruptions during course of Work. Contractor will be required to cease use of Owner electrical-power and lighting systems, as required by the needs of Owner.
3. When use of Owner electrical system is approved in writing, Contractor is required to adhere to Owner's electrical lockout procedures. See Division 26– Electrical or Campus Design Guidelines.
 - a. Provide and maintain warning labels on energized equipment.
 - b. Replace plates, electrical devices or similar existing items or components damaged as a result of temporary usage.

1.05 TEMPORARY HEATING, COOLING AND VENTILATING A.

Service Requirements:

1. Contractor shall provide temporary heat as necessary for proper installation of all work and to protect all work and materials against injury from dampness and cold and to dry out building. Fuel, equipment and method shall be approved in writing by Owner's Representative.
2. Install initial services at time of site mobilization. Modify and extend systems as Work requires.
3. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
4. Use of permanent heating system is preferred to any other system for maintaining temperature of building during installation of finish materials, but such use will not be permitted before clean-up after plastering and/or drywall work has been completed. Contractor shall make every effort to complete permanent heating

system in time for such use. Permanent fans shall not be used before filters are installed. Filters shall be cleaned and serviced by Contractor just prior to final acceptance.

- a. Vent portable units to building exterior, complete with automatic controls. Direct-fired units are not allowed. Locate units and outlets to provide uniform distribution of heating, cooling and ventilating.
- b. Operate and maintain existing equipment being used; clean or replace filters and install filters in duct extensions as necessary to maintain occupied areas, work areas and finished areas, in specified condition.
- c. Prior to operation of permanent equipment, verify controls and safety devices are complete, equipment has been tested, and inspection made and approved for operation.

- d. Remove temporary materials and equipment when permanent system is operational. Restore existing and permanent systems used for temporary purposes to original condition.
- e. Install temporary filters in air handling units and ducts, replace as necessary to prevent dust in equipment and ducts, to avoid contaminants in Work or finished areas. After completion, replace temporary filters with new, clean, reusable filters.
- 5. Maintain temperature, humidity, and ventilation in enclosed areas to provide ambient conditions for storage, preparation and Work; to cure installed materials, to prevent condensation, to dry floor surfaces and to prevent accumulations of dust, fumes and gases.
- 6. During non-working hours maintain temperature in enclosed areas occupied solely by Contractor at a minimum of 50°F., or higher as specified in individual Sections and by individual product suppliers and manufacturers. Areas occupied in whole or in part by Owner are to be maintained at normal temperatures.

B. Utility Sources:

- 1. Electrical: As specified above in Item 1.04.
- 2. Existing mechanical systems may be used for temporary purposes. Coordinate use with Owner for conditions to be maintained in adjacent Owner occupied areas.
- 3. Contractor shall provide and pay for all installation, operation, maintenance, and removal of equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California.

1.06 TEMPORARY WATER

A. Service Requirements:

- 1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner's systems when temporary service is connected.
- 2. Water service, if necessary for construction, can be made available at no expense to the Contractor provided the water is not wasted. Contractor shall be responsible for distribution of water to points of use.
- 3. Certified reduced pressure type back-flow prevention device as submitted to and approved by Owner shall be installed before water is obtained from an Owner facility fire hydrant or interior building connection.

B. Plumbing: Maintain system to provide continuous service with adequate pressure to outlets, including Owner system when temporary service is connected. See also Division 1 Approvals.

- 1. Size piping to supply construction needs, temporary fire protection, and for Owner's needs when existing service is connected.
- 2. Disinfect piping used for drinking water. See Division 33 and 22 for requirements or Campus Design Guidelines

3. Source: Owner existing service, connect at locations as directed by Owner.
 4. Provide valved outlets to control water pressure adequately for hoses.
 5. Fire hydrants used for water supply for construction – Contractor must use only ⅞” square hydrant wrench on square operating nut and must use only pentagon wrench on pentagon operating nut. This is to prevent damage to the hydrant operating nut. Any damage caused by the use of an improper wrench or other misuse of the hydrant must be repaired at contractor expense. Contractor must inspect hydrant prior to use and make the Owner aware of any pre-existing damage.
- C. Use of Existing System: Existing system may be used for temporary water. Monitor usage to prevent interference with Owner's normal operational requirements.
 - D. Use of Permanent System: Contractor shall obtain written agreement from Owner establishing start of warranty period and conditions of use.
 - E. Contractor shall pay for installation, operation maintenance and removal of system and restoration of existing and permanent equipment. Owner will pay costs of water consumed for normal construction operations. Contractor shall take measures to conserve usage.

1.07 TEMPORARY FIRE PROTECTION A.

Requirements:

1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
2. Provide and maintain fire protection equipment including extinguishers, fire hoses and other equipment as necessary for proper fire protection during course of the Work.
3. Use fire protection equipment only for fighting fires.
4. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings and throughout construction site. In area under construction, provide at least one (1) fire extinguisher for each 5,000 square feet of building floor area. Locate fire extinguishers so that a person never has to walk more than seventy-five (75) feet to obtain one.
5. Assign qualified person with authority to maintain fire protection equipment, institute fire prevention measures, and direct prompt removal of combustible and waste material. Submit ILSM requirements per Specification SECTION 013500 – SPECIAL PROCEDURES.

1.08 TEMPORARY TELEPHONE, DATA, INTERNET, and WIFI A. Service

Requirements:

1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
2. Contractor shall select from the following options:

- a. Owner shall provide conduit, cabling and dial tone to Contractor's location(s). Contractor shall pay Owner for cable, conduit installation and later removal of same and also pay Owner a monthly fee for use of Owner telephone, data internet, and WIFI system.
 - b. Owner shall provide conduit and cabling to Contractor's location(s). Contractor shall receive dial tone from local utility. Contractor shall pay Owner for cabling, conduit installation, maintenance of same and later removal of same. Contractor shall pay local utility for monthly telephone, data, internet and WIFI service.
 3. Contractor shall select number of lines, instruments and other features.
 4. Contractor shall prepare and submit to Owner an itemized request for telephone lines (according to option 2a or 2b above) and internet service. Project Manager will submit a service request to the IT department.
- B. Use of Existing System: Existing Owner telephone system shall not be used for temporary telephone service.
- C. Contractor Phone:
1. Contractor shall have telephone emergency number or other facility available at Contractor's business office for duration of contract where contractor and superintendent may be contacted within twenty-four (24) hours. Provide emergency numbers to Owner.
- D. Telephones:
1. Contractor shall use, and only permit to be used, FCC approved communication devices on frequencies approved by FCC and Owner.
 2. Contractor shall not use, or permit to be used, communication devices which interfere with existing Owner communication systems, including, but not limited to:
 - a. Life Flight or CHP helicopters.
 - b. Emergency Service vehicle communications.
 - c. Microwave transmission stations.
 - d. Cellular or other mobile phone systems.
- E. Temporary Internet Service: Provide a high-speed internet connection (Min. 20 Mbps download, 10 Mbps upload) to Contractor's field offices. The Contractor's field office shall be capable of sending and receiving e-mail and be able access the Internet.
1. WIFI coverage at the above internet speeds will be provided throughout the jobsite.

PART II - PRODUCTS

2.01 MATERIALS

- A. May be new or used, adequate to the purpose.
- B. Devices and Equipment: Standard devices, meeting UL requirements.
- C. Telephones: may be product of local service company or specialty devices compatible with service company requirements.
- D. Modems compatible with internet service.

PART III - EXECUTION

3.01 INTERRUPTION OF EXISTING SERVICES

- A. No existing utility services shall be interrupted at any time without prior written approval from the Owner. Required shutdowns shall be scheduled a minimum of fourteen calendar days prior to actual shutdown. The operation of valves, switches, etc. will be performed and paid for by Owner.
 - 1. Prior to the outage, all possible Work shall have been completed which will minimize the length of the required outage. During the outage, the Work will be prosecuted with diligence by an adequate number of skilled personnel.
 - 2. Provide and pay for all personnel required by the Owner to maintain safe conditions during the outage including but not limited to fire watch, safety monitors and/or traffic control. Coordinate Work with Owner's Representative.

3.02 REMOVAL OF TEMPORARY CONSTRUCTION

- A. At the completion of the Work, the Contractor shall remove from the Project site all temporary utilities and services construction. Leave the Project site clean and free from debris, materials, or equipment.

END OF SECTION 01 51 00

SECTION 01 52 00

CONSTRUCTION FACILITIES

PART I - GENERAL

1.01 SECTION INCLUDES A.

Field Offices and Sheds

B. Temporary Facilities

C. Temporary Sanitary Facilities

1.02 RELATED SECTIONS

A. Section 011100 – SUMMARY OF THE WORK

B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner continued use of the areas and spaces adjacent to construction.

C. Section 017400 – CLEANING

D. Section 017700 – CLOSEOUT PROCEDURES

1.03 FIELD OFFICES AND SHEDS

A. Field Office: Contractor shall provide a job office that will conform to the following minimum requirements:

1. Suitable space for Workstations, drawings, specifications, samples and other project records.
2. Conference space for eight (8) persons, including layout tables.
3. Heating and cooling to maintain a reasonable working environment.
4. Telephone, Data and WIFI service as specified in Section 015100 – TEMPORARY UTILITIES
5. Furnishings required: Conference table and chairs; racks and files for Contract Documents, submittals, and project record documents. Other furnishings are at Contractor's option.

B. Installation: Install office spaces for occupancy fifteen (15) calendar days after date of Owner/Contractor agreement.

C. Preparation: Fill and grade sites for temporary structures to provide drainage away from buildings.

- D. Contract Documents: Complete set of Contract Drawings and Contract Specifications shall be kept continuously at the site. Copies of all Change Orders, letters, Shop Drawings, etc., shall be kept on the jobsite at all times and shall be available for inspector's use.
- E. Contact numbers: Contractor shall provide telephone numbers where Contractor may be reached at all times during normal working hours and after normal working hours, if emergency problems develop that require Contractor's assistance.
- F. Storage Sheds and Containers for Materials, Tools and Equipment: If requested, Owner will provide space outside construction site where Contractor may provide and locate weather-tight sheds or containers for storage of construction materials, tools and equipment. Contractor shall be solely responsible for security of such sheds and containers. Size storage requirements to allow access, orderly provision of maintenance and inspection of products.
- G. Cleaning: Weekly janitorial services for offices; periodic cleaning and maintenance for office and storage areas. Contractor shall keep construction loading and parking areas clear of construction debris, especially debris that may cause slipping or tripping hazard that may injure vehicle tires, that may stain surfaces, and that may be tracked into existing buildings. Maintain approach walks free of mud and water.
- H. Removal: Upon completion of the work, and before the final payment, Contractor shall remove all temporary work and facilities and return site to condition required by the General Conditions of the Contract and at no change to the Contract Sum or the Contract Time.

1.04 TEMPORARY FACILITIES

- A. Contractor shall provide and maintain the following temporary facilities as required for execution of the Work:
 - 1. Scaffolding, staging, runways and similar equipment.
 - 2. Hoists or construction elevators, complete with operators, power and signals required.
 - 3. Temporary rigging, rubbish chutes, barricades around openings, ladders between floors, and similar equipment.
 - 4. Barricades, fencing, lights and similar safety precautions.
 - 5. Security cameras for remote video surveillance of the project site and 24/7 monitoring services that records and reports incidents and alarms. Security cameras to provide full coverage of the construction and storage site area.
- B. Maintenance: Use all means necessary to maintain temporary construction facilities and controls in proper and safe condition throughout progress of the Work.
- C. Replacement: In event of loss or damage, promptly restore temporary construction facilities and controls by repair or replacement at no change to the Contract Sum or the Contract Time.
- D. Conformance: All materials and equipment required to safely accomplish work under this Section shall be in conformance with requirements of CAL OSHA and other State and Federal Codes and regulations where applicable.

- E. Codes: All temporary work and facilities shall conform to the above requirements that pertain to operation, safety and fire hazard.
- F. Construction Site Security: Temporary barriers, doors and gates shall be keyed to Owner's master lock system. Security hardware to be provided by Contractor. Keying to Owner master lock system will be provided by Owner.

1.05 TEMPORARY SANITARY FACILITIES

- A. Use of existing facilities: Designated toilet facilities may be used by Contractor.
 - 1. Assigned facilities: Location of assigned toilet facilities and maintenance of same are responsibility of Owner. Contractor shall not have exclusive use to these facilities and shall abide by health and safety criteria regarding their use and sanitary upkeep.
 - 2. Unassigned facilities: Unassigned toilet facilities shall not be used without written authorization of Owner's Representative.
 - 3. Contractor may use existing toilet facilities that are within the limits of the Work. B.

Contractor shall pay service charges for connection and use of sewage utilities.

- C. Portable units: Enclosed, portable, self-contained units or temporary water closets and urinals, secluded from public view may be used. Self-contained units shall be approved by Owner's Representative prior to use.
 - 1. Contractor shall pay costs of installation, maintenance and removal of temporary sanitary facilities.
 - 2. Provide facilities at time of site mobilization.
 - 3. Modify and extend services as work progress requires.
 - 4. When utility services are available, provide water, sewer service, and temporary water closets; remove portable facilities. Remove temporary fixtures when permanent facilities are operational.
 - 5. Clean areas of facilities daily, maintain in sanitary condition. Disinfect fixtures, repair or replace damaged fixtures, accessories and surfaces.
 - 6. Provide toilet paper, paper towels, and soap in suitable dispensers.
 - 7. Restore existing and permanent areas and facilities used to original condition. Remove all temporary construction facilities above and below grade. Leave the project site clean and free of debris, materials and equipment.

PART II - PRODUCTS

2.01 MATERIALS

- A. Serviceable, new or used, adequate for required purpose. PART III -

EXECUTION – Not Applicable to this Section

END OF SECTION 01 52 00

SECTION 01 55 00

VEHICULAR ACCESS AND PARKING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Parking and Access Roads
- B. Traffic Regulation
- C. Project Informational Signs

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner's continued occupancy and use of the areas and spaces adjacent to construction.
- D. Section 017400 – CLEANING
- E. Section 017700 – CLOSEOUT PROCEDURES: Project Closeout.

1.03 PARKING AREAS AND ACCESS ROADS

A. Access Roads: Existing roads shall be used for construction access within limits defined herein. Temporary construction access roads shall not be permitted. B. Parking: Parking is controlled and limited by Owner.

- 1. Parking of personal vehicles belonging to Contractor employees may be arranged at the project site with Owner's Project Manager Approval. Parking will be allowed in employee permit areas, at the current permit rates depending on space availability.
- 2. Delivery of materials may be made to the job-site as required. Contractor shall coordinate with Owner's Representative.
- 3. Dumpsters shall be located in approved location as arranged by Owner's Representative.
- C. Existing Pavements and Parking Areas: Designated existing on-site streets and driveways may be used for construction traffic. Vehicles with metal tracks will not be allowed.
 - 1. Designated areas of existing parking facilities may be used by construction personnel. Do not allow heavy vehicles or construction equipment in parking areas.

2. Maintain traffic and parking areas in a sound condition, free of excavating material, construction equipment, products, mud, snow and ice.
3. Maintain existing and permanent paved areas used for construction. Repair existing facilities damaged by usage to original condition: promptly repair breaks, potholes, low areas, standing water and other deficiencies, to maintain paving and drainage in original or specified condition.
4. Remove temporary materials and construction when permanent paving is usable.

1.04 TRAFFIC REGULATION

- A. Schedule of Access Closing: Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. Contractor shall provide schedule of planned closing of any street for approval by Owner and shall give minimum of fourteen (14) calendar days' notice before closing any street or access.
- B. Use of Fire Lanes: Contractor shall notify Owner of all major pickups and deliveries that require use of controlled access fire lanes. Keys to gates or other barriers will be provided, as needed, to allow use of fire lanes. Vehicles parked in fire lanes for delivery of materials shall be continuously manned for immediate removal if required by the Owner.
 1. Fire Lanes to remain open at all times and shall not be blocked without a Traffic Control Plan provided prior to work at the Fire Lane and approved by the Owner's Representative.
- C. All major pick-up and delivery operations shall occur in total before or after normal working hours.
 1. Drawings may indicate haul routes designated by Owner for use of construction traffic. Confine construction traffic to haul routes.
 2. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.
- D. Post-mounted and wall-mounted traffic control and informational signs as specified herein.
 1. Traffic Control Signs, Traffic Message Boards, Cones, Drums, Flares, Lights and Flag Control equipment: All as approved by California MUTCD requirements.
 2. Contractor shall furnish at all barricades: Lights and flag control required to control traffic, and shall also provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for protection of the public; and maintain from the beginning of twilight throughout the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and/or the Work.
- E. Construction Vehicle Parking: Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations. Prevent parking on or adjacent to roads or in non-designated areas.
- F. Flag Control: Provide properly trained and equipped flagmen to regulate vehicular traffic when construction operations or traffic encroach on public traffic ways.

1. Provide properly trained and equipped personnel to regulate pedestrian traffic at all interior locations where construction traffic interfaces with Owner traffic.
 2. Flag control personnel shall wear appropriate identifying clothing such as bright colored vests, clearly visible and identifiable as having responsibility for traffic control.
- G. Lights: Use lights during hours of low visibility to delineate traffic lanes and to guide traffic.
- H. Traffic Signs and Signals: At approaches to site and on site, install traffic signs and signals at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
1. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.
 2. Relocate traffic signs and signals as Work progresses, to maintain effective traffic control.
 3. Remove equipment and devices when no longer required. Repair damage caused by installation.

1.05 PROJECT INFORMATIONAL SIGNS

- A. Project Identification Sign: Contractor shall provide one (1) project sign. Sign will consist of one (1) 8' x 4' x 3/4" exterior grade plywood with medium or high-density phenolic sheet overlay, painted plywood sign on fence area at construction field office or yard.
1. Information on sign shall include PROJECT NAME, Owner Name, Owner's consultants, etc. Copy will be provided by the Owner.
- B. Painted Informational Signs: Provide at each field office, storage shed and yard, directional signs to direct traffic into and within site. Relocate as Work progress requires. C. Maintain signs and supports: Clean, repair deterioration and damages.
- D. Remove signs, framing, supports and foundations at completion of Project and restore the area.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 55 00

SECTION 01 56 00

TEMPORARY BARRIERS, ENCLOSURES and CONTROLS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Barriers and Enclosures

B. Protected Walkways and Weather Closures

C. Tree and Plant Protection

D. Temporary Controls

1.02 RELATED SECTIONS

A. Section 011000 – SUMMARY OF THE WORK

B. Section 017400 – CLEANING

1.03 BARRIERS AND ENCLOSURES

A. Barricades: Provide to prevent public entry, to protect existing trees and plants, and to protect existing facilities and adjacent properties from damage during construction period. Relocate and extend as construction progress requires. B. Partitions and Ceiling Enclosures:

1. Fire Enclosures-Rated-Corridors and Rated Assemblies: Provide non-combustible dust-proof barrier framed with 20-gauge metal studs spaced 24" o/c maximum and covered on both sides with 5/8" thick Type-X rated gypsum wallboard fire taped, braced so to be self-supporting without fastening to existing finishes.
 - a. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finish.
 - b. Finish exposed surfaces with two (2) coats of paint (color as selected by Owner), maintain in neat, orderly appearance and paint barrier on public side. Temporary emergency exit and or directional signage indicating Emergency Exits will be furnished and installed by Contractor.
 - c. Provide temporary doors in corridors with twenty (20) minute fire-rated assemblies and locksets to limit use.
 - d. Use of access doors and routes by workmen to be approved by Owner's Representative.

2. Fire Retardant Enclosures - Non-Rated Assemblies: Provide non-combustible dust-proof barriers framed with metal studs and covered on public side with Fire Retardant plastic laminate sheathing material. Flame spread 10 - smoke development 45 - fuel contribution undeterminable, as manufactured by Reef Industries, Inc., P.O. Box 33248, Houston, TX77033 or equal.
 - a. Joints shall be taped and sealed over framing studs.
 - b. Bracing shall be self-supporting without fastening to existing finishes.
 - c. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finishes.
 - d. Provide non-staining taped seal to surrounding materials to insure seal.
 - e. Non-Rated Assemblies for Dust Control: Use ½" Type-X or equal gypsum wallboard applied on occupancy side on framing member. Joints over studs shall be taped and sealed. Other detail similar to 1.03-B.2 above.

C. Removal: Remove temporary materials, equipment and construction at completion; repair damage caused by installation or use of barricades and enclosures. Restore existing facilities used during construction to specified or to original condition.

1.04 DIESEL VEHICLE/EQUIPMENT IDLING PROCEDURES

- A. When drivers of diesel powered on-road vehicles arrive at loading or unloading areas to drop-off or pick-up passengers, supplies, equipment, materials, etc., they shall turn off their vehicle's engine as soon as possible but no later than five minutes after arrival.
- B. Operators of off-road diesel-powered equipment shall turn off their engines when the equipment is not performing its primary function, but no later than five minutes after the equipment has come to a stop.
- C. Idling for "warm-up" prior to diesel vehicle or equipment operations on Owner property shall be limited to a maximum of five minutes.
- D. At end of work shift, or for the purpose of servicing, all diesel equipment shall be parked on site at furthest location away from Facility air intake systems.
- E. All diesel-powered equipment shall be maintained in good operating condition. Owner representative will direct Contractor to remove any equipment producing high amount of diesel fumes resulting from diesel equipment being old or in poor operating condition.

1.05 PROTECTED WALKWAYS AND WEATHER CLOSURES

- A. Cover walkways to provide access to existing facilities for use by public and Owner personnel.
- B. Provide temporary roofing and weather-tight insulated closures of openings in exterior wall surfaces, to maintain specified working conditions, to protect products and finished work from inclement weather.

- C. Critical access and protected walkways shall comply with the CBC and CFC.

1.06 TREE AND PLANT PROTECTION

- A. Tree Protection: All trees not marked for removal shall be protected against damage from construction operations. Where necessary, in the opinion of Owner's Representative, trees surrounding building footprint or in close proximity to construction operation shall be protected with barricades. No trees shall be cut or felled without approval of Owner's Representative. Trees cut and/or removed without explicit instruction shall be replaced by Contractor at no cost to the Owner.
- B. Cutting and Pruning: Cutting and pruning of trees to accommodate construction shall be done only with approval and direction by Owner's Representative. Soil within the spread of tree branches (within drip line) shall not be disturbed except as directed by excavation or trenching drawings. Advance notice shall be given Owner if tree roots of 3" diameter or greater must be cut.
- C. Drip line Protection: Cars, trucks, or equipment shall NOT be parked or set within the drip line of any tree; nor shall there be any stockpiling or temporary building erected within the drip line.

1.07 TEMPORARY CONTROLS

- A. Dust Control: Contractor shall take appropriate steps throughout project to prohibit airborne dust due to work under this contract. Execute work by methods to minimize raising dust from construction operations. Water shall be applied wherever practical to settle and hold dust to minimum, particularly during demolition and moving of materials. No chemical dust prohibitor shall be used without written approval by Owner's Representative.
- B. Noise Control: Control noise as directed by Owner's Representative.
- C. Pollution Control: Use of noxious or toxic materials for all applications in alterations or work in buildings occupied by Owner personnel shall be done after proper notification and approval by Owner, this includes work performed on weekends or other unoccupied times.
 - 1. Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- D. Waste Control: All waste materials resulting from process of clearing and construction shall be disposed of as follows:
 - 1. General Refuse: All refuse and debris, combustible and incombustible, resulting from construction process, shall be removed from Owner property as described in the General Conditions of the Contract. Contractor shall not use any refuse container belonging to Owner.
 - 2. Hazardous Refuse: Solvents, oils and any other hazardous material shall be disposed of in containers and removed from site. At completion of work, any contaminated soil shall be removed and replaced with good soil by Contractor at no expense to Owner. Coordinate disposal with Lake County EH&S department.
 - 3. Building materials containing asbestos that are part of the project shall not be disturbed or removed by the contractor during the construction of temporary barriers, enclosures and

controls. The contractor shall request from the Owner's Representative materials that have been identified on the project to contain asbestos so that these materials are not disturbed. The contractor shall refer to Hazardous Materials Procedures regarding materials impacted by construction of temporary barriers, enclosures and controls.

- E. Drainage Control: All portions of Work shall be kept free of standing water at all times during construction. Where required, temporary drainage ditches, berms, or pumping systems shall be constructed to divert drainage water from construction site, and resultant water shall be carried to nearest natural water course and disposed of without erosion to surrounding area. Care shall be taken to prevent silting of existing sinkholes and watercourses. Silt deposited as a result of the Work shall be removed and disposed of by Contractor at no cost to the Owner.
1. Rough grade site to prevent standing water and to direct surface drainage away from excavations, trenches, adjoining properties and public rights-of-way/s.
 2. Maintain excavations and trenches free of water. Provide and operate pumping equipment of a capacity to control water flow.
 3. Provide de-watering system and pumping to maintain excavations dry and free of water inflow on a twenty-four (24) hour basis.
 4. Provide piping to handle pumping outflow to discharge in manner to avoid erosion or deposit of silt. Provide settling basins to avoid silting; install erosion control at out-falls of system.
 5. Winterize and stabilize site with Geotextile Fabric and gravel so that the site drains and avoids it becoming a quagmire. Maintain access roads on the site with Geotextile Fabric and gravel and make repairs to avoid furrow, ruts, or potholes.
 6. Remove equipment and installation when no longer needed.
- F. Sediment and Erosion Control: Contractor shall furnish, install and maintain means and methods to reduce excessive erosion, minimize sedimentation discharge, and prevent construction materials discharge from causing off-site and on-site contamination. Contractor shall coordinate with Owner.
1. Contractor shall pay for and maintain required permits.
 2. Contractor shall furnish:
 - a. National Pollutant Discharge Elimination (NPDE) permit.
 - b. Contractor shall file Notice of Intent to California State Water Resources Control Board (SWRCB) stating date construction will begin. Provide copy to Owner.
 - c. Contractor shall prepare, maintain and follow Storm Water prevention Plan. The Plan shall include Contractor's Best Management Practices (BMP) describing means and methods to control sediment, erosion and other pollutants.
 - d. Contractor shall keep BMP Program at jobsite.

PART II - PRODUCTS

2.01 Polyethylene: Polyethylene used for critical barriers and for sealing walls, floors or ceiling systems shall be a minimum of 6 mil thickness and fire-retardant type listed by Fire Underwriters Laboratories, Griffolyn #T55R with Griffolyn fire retardant tape, or equal.

PART III - EXECUTION

END OF SECTION 01 56 00

SECTION 01 61 00

PRODUCT REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Product Options

- B. Product Substitutions
- C. Product Transportation and Handling Requirements
- D. Product Storage and Protection
- E. Product System Completeness

1.02 RELATED SECTIONS

- A. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- B. Section 013900 - GREEN BUILDING POLICY IMPLEMENTATION
- C. Section 014100 – REGULATORY REQUIREMENTS
- D. Section 014500 – QUALITY CONTROL

1.03 PRODUCTS

- A. Product Selection: Provide products that comply with Contract Documents, are undamaged and unused at installation.
- B. Product Completeness: Provide products complete with all accessories, trim, finish, safety guards and other devices needed for complete installation and for intended use and effect.
- C. Products: Items purchased for incorporation in Work, whether purchased for project or taken from previously purchased stock; this includes materials, equipment, assemblies, fabrications and systems.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model designation indicated in the manufacturer's published product data.
 - 2. Materials: Products that are shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed or installed to form part of the Work.
 - 3. Equipment: A product with operating parts, whether motorized or manually operated, requiring connections such as wiring or piping.
- D. Specific Product requirements: Refer to requirements of Section 014500 – QUALITY CONTROL and other Sections in Division 2 through 49 for specific requirements for products.
- E. Code Compliance: All products, other than commodity products prescribed by Code, shall have current listing service report or research report. Minimum Requirements: Specified requirements are minimum requirements.

- F. Interchangeability: To fullest extent possible, provide products of the same kind from single source. Products supplied in quantity shall be same product and interchangeable throughout the Work. When options are specified for selection of any of two (2) or more products, product selected shall be compatible with products previously selected.
- G. Nameplates: Except for required labels and operating data, do not attach manufacturer's name plates or trademarks on surfaces exposed to view in occupied spaces or on the exterior of building.
- H. Equipment Nameplates: Provide permanent nameplate on each item or service-connected or power-operated equipment. Locate on inconspicuous accessible surface. Nameplate shall contain the following information and essential operating data:
 - 1. Name of product and manufacturer
 - 2. Model and serial number
 - 3. Capacity and Speed
 - 4. Ratings and other pertinent information
- I. Listing Service: Products, for which listing service standards have been established and for which their service label is available, shall bear the appropriate listing service label.

1.04 PRODUCT OPTIONS

- A. Products Specified Only by Description: Where the Contract Specifications describe a product, listing characteristics required, with or without use of a brand name, provide a product that provides the appropriate characteristics and otherwise complies with the requirements.
- B. Performance Specification: Where Contract Specifications require compliance with performance requirements, provide products that comply and are recommended for application. Manufacturer's recommendations may be contained in Product literature, or by certification of performance.
- C. Compliance with Standards: Where Contract Specifications require compliance with a standard, select a product that complies with the standard specified.
 - 1. Wherever catalog numbers and specific brands or trade names followed by the designation "to match existing" are used in conjunction with product(s) required by the Contract Specification, no substitution will be considered.
- D. Products Specified by Naming One (1) or More Manufacturers:
 - 1. Specified manufacturer(s): Provide specified product(s) of the specified manufacturer. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the design used in the Work and the use of alternative-named products or substitutes may require modifications in that design. If such alternatives are proposed by Contractor and are approved by Owner, Contractor shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to Owner for evaluation of revisions and modifications of the design resulting from the substitutions submitted by Contractor.
 - a. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and "or equal" supporting data for second manufacturer's product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitution.

2. Quality Standard: Products(s) of the specified manufacturer shall serve as standard by which the product(s) of other named manufacturers are evaluated.
- E. "Or Equal" Provision: Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by Contract Specification to establish standard of quality, utility, and appearance required.
1. "Or Equal" Products: Equivalent products of manufacturers other than the specified manufacturer may be provided if determined by Owner's Representative to be acceptable in accordance with substitution provisions following:
 - a. Contractor shall submit to Owner's Representative, within thirty-five (35) calendar days after the date of commencement of the Work specified in the Notice to Proceed, a list in excel format containing Specification Section number with extension i.e. 088000 2.B.1.a. with descriptions of each product proposed for substitution.
 - b. Contractor shall provide supporting data as required herein.
 - c. Owner will evaluate Contractor's proposal. The decision of Owner shall be final.
 - d. Owner will accept, in writing, proposed substitutions that are in Owner's opinion equal in quality, utility and appearance to the product specified. Such acceptance does not relieve Contractor from complying with requirement of the Contract Documents.
 - e. Contractor shall be responsible for all costs of any changes resulting for Contractor's proposed substitutions that affect other work, or the Work of Separate Contractor.
 - f. Failure to place orders for specified products sufficiently in advance of required date for incorporation into the Work will not be considered justification for Contractor to request a substitution or deviation from requirements of the Contract Documents. The sixty (60) calendar day submittal period does not excuse Contractor from completing the Work within the Contract Time.
 2. Contractor's Determination: Prior to submitting "or equal" product(s) for consideration, Contractor shall review and determine product(s) meet or exceed the quality and warranty provisions of the specified product.
 3. Late Substitution Requests: If a request for substitution occurs after the sixty (60) calendar day period, the substitution may be reviewed at the discretion of Owner and the costs of such review, as approved by Owner, shall be deducted from the Contract Sum.
 - a. Product Availability Waiver: Substitutions will be considered after the sixty (60) calendar day period only when a product becomes unavailable due to no fault of the Contractor.
- F. Visual Matching: Where Contract Specifications require matching a sample, Owner's decision on proposed product match is final. If no product matches and complies with other requirements, comply with provisions for "substitutions" for selection of a matching product in another category.
- G. Visual Selection: Where requirements include the phrase "....as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product that complies with other

requirements. Owner's Representative will select color, pattern and texture from the product line selected.

1.05 SUBSTITUTIONS

- A. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract shall be considered "substitutions". The following are not considered substitutions:
1. Revisions to Contract Documents requested by Owner's Representative or Owner's Consultant.
 2. Specified options of products and construction methods included in Contract Documents.
 3. Compliance with governing regulations and orders issued by governing authorities.
- B. Substitution Provisions: Requests for Substitutions will only be considered if Contractor submits the following data:
1. Furnish complete technical data including drawings, performance specifications, samples, test reports and any additional information required by Owner's Representative, for each product proposed for substitution.
 - a. Submit ONE (1) PDF file with bookmarks.
 - b. In reviewing supporting data for substitution, Owner will use, for purpose of comparison, all characteristics of Basis of Design specified product as it appears in manufacturer's published data even though all characteristics may not have been particularly mentioned in the Contract Specifications. If more than two (2) substitutions of supporting data are required, Owner's costs of reviewing additional supporting data will be deducted from the Contract Sum.
 - c. Submit statement indicating substitution's effect on the Construction Schedule, if any.
 - d. Submit cost information, including proposal of net deduction, if any, from Contract Sum.
 2. Furnish statement by Contractor that proposed substitution is in full compliance with requirements of Contract Documents and Applicable Codes.
 3. Provide a Comparison Table as part of the substitution request listing the design and performance criteria of the Basis of Design specified product with the proposed substitution product side by side. The design and performance criteria shall include but not limited to; size, thickness, gauge, strength, function, ASTM rating, test report data, manufacturing association standards & data, technical properties & performance data, traffic or weather resistance, quality assurance data, warranty and other design and performance criteria list in Basis of Design manufactures specification and written material.
 4. Furnish list of Subcontractors, if any, that may be affected by the substitution.
 5. If proposed substitution requires portions of the Work to be redesigned or removed in order to accommodate substituted product, submit design and engineering calculations prepared by the licensed design professional of record.
 6. Contract Document Revisions: Should Contractor-proposed or alternate sequence or method of construction require revision of Contract Documents, including revisions for

purpose of determining feasibility, scope or cost, or revisions for the purpose of obtaining approval by governing authorities having jurisdiction, revisions will be made by Owner's Consultant who is the design professional of record.

- a. Services of Owner's Consultants, including time spent in researching and reporting on proposed substitutions or alternate sequences and methods of construction, shall be paid by Contractor when such activities are considered additional services to the design services contracts of Owner.
- b. Cost of services by Owner's Consultants shall be paid on a time and material basis, based on current hourly fee schedules, with reproduction,

long distance telephone and shipping costs reimbursable. Such fees shall be paid whether or not the proposed substitution or alternate sequence or method of construction is ultimately accepted by Owner and Change Order executed. Such fees owed shall be deducted from the Contract sum on the next Application for Payment.

7. Submit all proposed substitutions in writing to Owner using the Request for Substitution form provided at the back of this Section.

- C. Owner may reject any substitution not proposed as described above and presented within the time prescribed.
- D. Revisions to submittals: If Owner's Representative, in reviewing list of substitutions, requires revisions or corrections to previously accepted Shop Drawings and supplemental supporting data, Contractor shall promptly do so. If any proposed substitution is judged by Owner's Representative to be unacceptable, the specified product shall be provided at no cost to the Owner.
- E. Samples: Samples may be required. Tests required by Owner's Representative for determination of quality and utility shall be made by Contractor's independent testing Laboratory, at expense of Contractor, with prior Owner acceptance of test procedure.

1.06 TRANSPORTATION, DELIVERY AND HANDLING

- A. Transport products by methods to avoid product damage.
- B. Schedule delivery to minimize long-term storage and prevent overcrowding construction spaces. Coordinate with installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
- C. Deliver products in undamaged condition in manufacturer's original sealed container or packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- D. Provide equipment and personnel to handle products by methods to prevent soiling, marring or other damage.
- E. Promptly inspect products on delivery to ensure products comply with Contract Documents, quantities are correct, and to ensure products are undamaged and properly protected. Promptly remove damaged or defective products from site and replace at no adjustment to the Contract Sum and/or Contract Time.

1.07 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store products to facilitate inspection and measurement of quantity or counting of units.
- C. Store heavy materials away from structures in a manner that will not endanger supporting construction.
- D. Store sensitive products in weather-tight enclosures. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation.
 - 1. Maintain temperature and humidity within range required by manufacturer's instructions.
 - 2. Exterior Storage:
 - a. Store products above ground on blocking or skids to prevent soiling, staining and damage.
 - b. Cover products that are subject to damage by the elements with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.
 - c. Store sand, rock, aggregate or other loose granular material in well drained area on solid surfaces. Prevent mixing with foreign matter.
 - 3. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and maintained under required conditions, free from damage and deterioration.
- E. Protection After Installation: Provide barriers, substantial coverings, notices and other materials or methods as necessary to protect installed work from traffic, subsequent construction operations and weather.
 - 1. Maintain temperature and humidity conditions in interior spaces for Work in accordance with manufacturers' instructions for materials and equipment being protected.
 - 2. Remove protective measures when no longer required and prior to Acceptance of the Work.

1.08 SYSTEM COMPLETENESS

- A. The Contract Drawings and Contract Specification are not intended to be comprehensive directions on how to produce the Work. Rather, the Drawings and Specifications are instruments of service prepared to describe the design intent for the completed Work.
- B. It is intended that equipment, systems and assemblies be complete and fully functional even though not fully described. Provide all products and operations necessary to achieve the design intent described in the Contract Documents.
- C. Contractor is urged to report to Owner's Representative immediately when elements essential to proper execution of the Work are discovered to be missing or misdescribed in the Contract Documents or if the design intent is unclear.
- D. Should an essential element be discovered as missing or misdescribed prior to receipt of bids or establishing a negotiated Contract Sum, an Addendum or Clarification will be issued so that all cost may be accounted in the Contract Sum.

- E. Should an obvious omission or misdescription of a necessary element be discovered and reported after execution of the Agreement, Contractor shall provide the element as though fully and correctly described.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSTALLATION OF PRODUCTS

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

3.02 Refer to the following Attachment:

- A. Request for Substitution Form.

END OF SECTION 01 61 00
REQUEST FOR SUBSTITUTION

Substitution #: _____ Submittal #: _____ Date: _____

Specification Project#:

#: _____

PROJECT NAME: _____

<p>COUNTY OF LAKE PUBLIC SERVICES 333 2nd Street TO: Lakeport, CA 95453</p> <p>P: 707-262-1618 C: 707-245-6911</p> <p>Attn.: Project Manager Joseph.Cooper@lakecountycalifornia.gov</p>	<p>FROM:</p>
--	--------------

Name of Party Submitting Request for Substitution:

Reason for Submitting Request for Submission: _____

Specification Section and Paragraph #: _____

Substitution Manufacturer name and address: _____

Proposed substitution (trade name of product, model or catalog #): _____

Fabricators and Suppliers (as appropriate): _____

PRODUCT DATA:

ATTACH PRODUCT DATA AS SPECIFIED IN SPECIFICATION SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Similar projects using product (list dates of installation and names/phone numbers of Owners):

Similar comparison of proposed substitution with specified product (indicate variation(s), and reference each variation to appropriate Specification Section paragraphs):

-ATTACH COMPARISON SUMMARY-

(SUBSTITUTION REQUEST CONTINUES)

Quality and performance comparison between proposed substitution and specified product:

Availability of maintenance services and replacement materials: _____

Effect of proposed substitution on Construction Schedule:_____

Effect of proposed substitution on other work or products: _____

SECTION 01 72 00

PREPARATION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Surveying and Field Engineering Services

1.02 RELATED SECTIONS

- A. Section 014500 – QUALITY CONTROL
- B. Section 017800- CLOSEOUT SUBMITTALS

1.03 REGISTRATION REQUIREMENT

- A. Contractor shall employ civil engineers/land surveyors, which are registered and licensed in the state of California and acceptable to the Owner.

1.04 LINE AND GRADES

- A. Contractor shall provide all construction survey work required for accurate location of the Work. Horizontal and vertical control for the Work shall be from project reference marks as shown on Contract Drawings. Owner's decision will be final in all questions regarding proper location of work.
- B. Contractor shall verify final configuration of project during demolition work. Minor adjustments of work to accommodate existing field conditions shall be responsibility of Contractor.
- C. For work that connects to existing structures with new floors or roofs that align with existing conditions; Contractor shall verify new and existing elevations prior to constructing the new floor or roof structure. Adjust elevations accordingly so that the new and existing floors are level and lineup.
 - 1. Owner approval in writing is required for any deviations from the contract documents intent.
- D. Replace control points that may be lost or destroyed, base requirements on original survey control, at no increase in the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify locations of survey control points prior to starting work. Promptly notify Owner's Representative of any discrepancies discovered.

3.02 SURVEY REFERENCE POINTS

- A. Protect survey control points prior to starting site work; preserve permanent reference points during construction. Make no changes without prior written notice to Owner's Representative.
- B. Promptly report loss or destruction of any reference point or relocation required to Owner's Representative. Replace dislocated survey points based on original survey control.
- C. All control points established for the project must be clearly shown on the record documents.

3.03 SURVEY REQUIREMENTS

- A. Establish minimum of three (3) permanent benchmarks on site, referenced to establish control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements, including pavements, stakes for grading, fill and topsoil placement, utility locations, slopes and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations and ground floor elevations.
 - 4. Controlling lines and levels required for mechanical and electrical work.
 - 5. Verify layouts as Work proceeds to assure compliance with required lines, levels and tolerances.
- C. Periodically certify layouts by same means.

3.04 RECORDS

- A. Maintain complete and accurate log of all control and survey work as it progresses Including but not limited to items indicated in 3.03, B. and 3.04, B.
- B. On completion of foundation walls, underground utilities and major site improvements, prepare certified survey showing all dimensions, locations, angles and elevations of construction. Provide as part of the As-Built Documents per Section 017800.

END OF SECTION 01 72 00

SECTION 01 73 00

CUTTING AND PATCHING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching Work.
- B. Hazardous Conditions Permit requirements for brazing, welding and other hot work.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013100 – COORDINATION
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- E. Section 016100 – PRODUCT REQUIREMENTS
- F. Individual Specifications Sections.
 - 1. Cutting and patching incidental to Work specified in this Section.
 - 2. Coordination with work in other Sections for openings required to accommodate Work specified in those other Sections.

1.03 SUBMITTALS

- A. Contractor shall complete and submit for review to Owner's Representative, a Coring/Sawcutting Form, included at the end of this Section, and obtain written authorization for Owner prior to the commencement of any dig activities. Contractor shall

include all pertinent information with the Coring/Sawcutting Form and submit with detailed work plan fourteen (14) calendar days prior to desired coring/cutting activity.

- 1. Structural integrity of any element of Project.
- 2. Integrity of weather-exposed or moisture-resistant element.
- 3. Efficiency, maintenance, or safety of any operational element.
- 4. Visual qualities of sight-exposed elements.
- 5. Work of Owner.

6. Utility supply, drains, fire alarm, communication. B. Include in request:

1. Identification of Project, including Owner's Project Name and Project Number.
2. Location and description of affected Work.
3. Necessity for cutting and patching.
4. Description of proposed work, and products to be used.
5. Alternatives to cutting and patching.
6. Effect on work of Owner.
7. Written permission of Owner.
8. Date and time work will be executed.

1.04 NOTIFICATIONS

A. Before starting welding or cutting work involving the use of gas or electric welding equipment, or any brazing work involving gas or electric brazing equipment Contractor shall complete a Hazardous Conditions Permit form. Contractor shall allow seventy-two (72) Hours for Fire Marshal's approval and issuance of Hazardous Conditions Permit. This permit will be issued without cost to Contractor and may be applicable to more than one (1) building. Contractor shall be responsible for reporting to Lakeport Fire Department either by telephone or in person at beginning and end of each day's work. Provide minimum written notice of fourteen (14) calendar days prior to such activities.

1. Welding and brazing personnel must be certified by an Owner approved laboratory and must maintain this certification during the work of this Contract.
2. Contractor is responsible for notifying Owner of all apparent locations where suspect asbestos containing materials may be present or discovered during the course of the project such as cement pipes or other insulated material, which may be a result of newly excavated materials below grade or after building systems are opened such as within wall, ceiling or subfloor spaces. When any such location is discovered by Contractor, information relating thereto shall be immediately communicated to Owner's Representative.
3. Where welding and cutting activity is required and suspect painted surfaces are present that will be impacted by the welding or cutting activity, the contractor shall request from the Owner's Representative information regarding laboratory analysis for lead or other hazardous metals in the painted metal components before any cutting or welding is performed. The contractor shall refer to Section 013500 Special Procedures, 1.05 Hazardous Materials Procedures regarding materials impacted by welding and cutting activity.
4. Contractor shall then follow any and all instructions as indicated by Owner's Representative.

PART II - PRODUCTS

2.01 MATERIALS

- A. Product substitution: For any proposed change in materials, submit request for substitution under provision of SECTION 016100 – PRODUCT REQUIREMENTS. Use only materials for cutting, fitting, and patching which comply with the applicable

Specification Sections, and which match adjacent materials. Use materials whose installed performance will equal or surpass that of existing materials.

PART III - EXECUTION

3.01 EXAMINATION

- A. General: Execute cutting, fitting and patching including excavation and fill, to complete Work and:
 - 1. Fit the several parts together, to integrate with other work.
 - 2. Uncover work to install ill-timed work.
 - 3. Remove and replace defective and non-conforming work.
 - 4. Remove samples of installed work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical work.
- B. Examination, General: Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
 - 1. After uncovering existing Work, inspect conditions affecting proper accomplishment of Work.
 - 2. Beginning of cutting or patching shall be interpreted to mean that existing conditions were found acceptable by Contractor.
- C. Ground Penetrating Radar: Determine by Ground Penetrating Radar all existing reinforcing, conduit and piping located in concrete walls and slabs prior to demolition. Clearly mark all locations and review with Owner Representative prior to demolition.

3.02 PREPARATION

- A. Temporary Supports: Provide supports to assure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Weather Protection: Provide protection from elements in all areas that may be exposed by uncovering work. Maintain excavations free of water.
- C. Protection. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas. Do not block required exit ways or stairs.
- E. Protect rated floor, wall and ceiling assemblies. Prior to cutting opening in a rated assemblies review with Owner's Representative and get written approval from the Lakeport Fire District Fire Marshal.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching to properly complete Work.
- B. Coordinate installation or application of products for integrated Work.
- C. Uncover completed Work as necessary to install or apply products out of sequence.
- D. Remove and replace defective or non-conforming Work.
- E. Provide openings in the Work for penetrations of mechanical and electrical Work.
- F. Provide cutting and patching to accommodate all demolition work as part of this contract. Provide level and plumb cuts at locations that will be exposed or to provide smooth and even surface for patching to existing work or surfaces.
- G. Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

3.04 PERFORMANCE

- A. Execute cutting and patching by methods to avoid damage to adjoining Work, and that will provide appropriate surfaces to receive final finishing.
- B. Execute cutting and patching of weather-exposed, moisture-resistant and sight-exposed surfaces by methods to preserve weather, moisture and visual integrity.
- C. Restore work with new Products as specified in individual Sections of Contract Documents.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval from Owner. Coordinate timing of all sawing and cutting work with the Owner's Representative. Do not over saw cut corners and intersection unless written authorization is provided from the Owner Representative and the Structural Engineer of Record.
- E. Fit work neat and tight allowing for expansion and contraction. Butt new finishes to existing exposed structure, pipes, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of firewalls, partitions, ceiling, or floor construction, completely seal voids with UL approved fire-rated assembly. Provide temporary closures at the end of each workday. Closures shall be approved by the Lakeport Fire District Fire Marshal.
- G. Refinish surface to match adjacent finish. For continuous surfaces, refinish to nearest intersection, corner or natural break and from floor to ceiling. For an assembly, refinish unit. All patched surfaces from new to existing shall provide a smooth and even transitions aligning with the adjacent surface with no visible marks, joints, seams, sheen, texture or color difference.
- H. Where new construction is to join with or match existing work, it shall be finished exactly to that work so as to form a complete unified and finished element.
- I. Visual Requirements: Do not cut and patch operating elements or related components in a manner that would, in the Owner's Representative's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in

visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner, including by not limited to.

1. Repair and patch in areas where finishes have been visually disturbed by cutting and patching to the nearest intersections.
2. Processed concrete finishes
3. Firestopping
4. Acoustical ceilings
5. Flooring
6. Carpeting

3.05 Refer to the Following Attachment A.

Coring/Sawcutting Notification

END OF SECTION 01 73 00

CORING/SAWCUTTING NOTIFICATION

TITLE: _____

PROJECT#: _____ LOCATION: _____

TRACKING NUMBER:
(Provided by PO&M)

Spec #: _____ DATE: _____

TO:	COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 <u>Project Manager:</u> <u>Joseph.Cooper@lakecountycalifornia.gov</u>	FROM:	
-----	---	-------	--

SCOPE:

HAS USA BEEN NOTIFIED?

☐

YES

☐

NO

When? _____

ARE ALL KNOWN UTILITIES

☐

By

☐

Whom? _____

MARKED? YES NO

LOCATION OF WORK SHOWN ON

☐☐

Purpose: _____

ATTACHED SITE PLANS? YES NO

DATE(S) CORING OR SAWCUTTING WILL TAKE PLACE:

Signed: _____

LAKE COUNTY USE ONLY

DATE RECEIVED:

WHO FROM OWNER WILL AUTHORIZE, SUPERVISE AND VERIFY? PHONE:

Utilities Verified by IOR? YES

☐ NO ☐

PO&M

Fire

Telecom

☐
☐

Occ. Safety Activities

☐ coordinated with:
Other (Itemize):

COMMENTS:

Owner Representative

PO&M:

Signed: DATE

AUTHORIZED:

COMPLETION DATE:

COMMENTS:

(Unknown Utilities Encountered,
Disruptions, Successes, Weather,
etc.)

SIGNED: _____

Copies to: Owner Consultants, Facilities Maintenance, Fire, Telecom, File, Others:

SECTION 01 74 00

CLEANING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Cleaning.
- B. Requirements for cleaning during progress of Work, at Substantial Completion of Work and at Acceptance of Work.
- C. Disposal of waste materials, debris and rubbish during construction.

1.02 RELATED SECTIONS

- A. General Conditions of the Contract: Cleanup.
- B. Additional Requirements: Cleaning for specific products or elements of Work are described in Specification Sections describing that Work.

PART II - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning agents and materials that will not create hazards to health or property and that will not damage surfaces.
- B. Use only those cleaning agents, materials and methods recommended by manufacturer of the material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning agent manufacturer.

2.02 EQUIPMENT

- A. Provide covered containers for deposit of waste materials, debris, and rubbish.
- B. Provide at each entry point to the Work, and at other areas as directed by Owner's Representative, a clean room sticky mat. Replace mats daily or as requested by Owner Representative.

PART III - EXECUTION

3.01 CLEANING

- A. Construction Cleaning: During Construction, maintain buildings, premises and property free from waste materials and rubbish. Dispose of such waste and debris at reasonable intervals off of Owner property.
 - 1. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.

2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to closing such spaces.
 - a. All horizontal surfaces above ceilings shall be cleaned prior to ceiling closure.
 3. After every concrete placement clean all wet concrete from all surfaces.
 - a. Interior and exterior
 4. Clean interior areas daily to provide suitable conditions for Work. Remove debris from areas of work on a daily basis at a minimum, or more often as required to provide suitable conditions for work.
 5. Broom clean with sweeping compound or HEPA Vacuum interior areas prior to start of surface finishing, and continue cleaning on an as needed basis.
 6. Control cleaning operations so that dust and other particles will not adhere to wet or newly coated surfaces.
 7. Provide a mat, as specified above, for project entrances and exits. Item to be of sufficient size to allow personnel exiting project site to clean debris and dust from shoes. Tracking dust and debris through working areas of the facility and/or related buildings is not acceptable.
 8. Any dust or debris tracked out of the construction site, either by foot traffic or by debris hauling vehicles shall be cleaned by the contractor. If the dirt or other debris is determined by the Owner's Representative to from the contractor's activities at the jobsite it shall be cleaned in a timely manner regardless of how far from the site it is.
- B. Conduct cleaning and disposal operations in compliance with Waste Management Program per 013900 and all applicable codes, ordinances, regulations, including antipollution laws.

3.02 SUBSTANTIAL COMPLETION CLEANING

- A. Execute a thorough cleaning prior to Substantial Completion review by Owner's Representative.
- B. At roof areas remove all unused materials and construction waste including but not limited to screws, nails, fasteners, sheet metal cuttings, scrapes, oil, grease and adhesive. Wash down roof horizontal and vertical surfaces. Clean out all debris at roof drains.
- C. Clean walkways, driveways and streets by thorough brooming and wash-down.
- D. Clear debris from storm drainage lines and ways, leaving site ready for stormy weather.
- E. Rake landscaped areas clean.
- F. Remove waste and surplus materials, rubbish and temporary construction facilities, utilities and controls.
- G. Disinfect containment and protection areas as directed by Owner Representative.

- H. For Airborne Contamination areas: Construction cleaning use wet cleaning methods and HEPA-filtered vacuum cleaners are required to minimize release of airborne contaminants. Contain waste materials, debris and rubbish.

3.03 FINAL COMPLETION CLEANING

- A. Complete final cleaning before submitting final Application for Payment.
- B. Employ professional building cleaners to thoroughly clean building immediately prior to final inspection.
- C. Remove the following but not limited to concrete splatters, paint splatters, pencil marks, pen marks, chalkline marks, tape, protective films & coatings, grease, mastic, adhesives,

dust, dirt, stains, fingerprints, labels, and other foreign materials from all sight-exposed interior and exterior surfaces.
- D. Restore damaged or marred surfaces.
- E. Remove dust from all horizontal surfaces not exposed to view, including light fixtures, ledges and fixture lenses.
- F. Clean and polish all glass, mirrors, and bright metal work. Clean and disinfect all plumbing fixtures.
- G. Damp wash all resilient flooring. Waxing of resilient flooring shall be done by the Owner.
- H. Thoroughly sweep all floors and vacuum all carpets.
- I. Cleaning of Work provided by Owner under separate contracts, will not be required except if soiled by construction activities under this Contract.
- J. Thoroughly clean and polish all resilient flooring, metal and plastic surfaces; remove labels and protective coatings.
- K. Replace filters and clean heating and ventilating equipment used for temporary heat and ventilation.
- L. Remove waste material or equipment that has been damaged, touch up and /or repair exposed areas; such repairs to be approved by Owner's Representative.
- M. Should final cleaning be inadequate, as determined by Owner's Representative, and Contractor fails to correct conditions, Owner's Representative may order thorough cleaning and deduct the cost from Final Payment.

3.04 FINAL COMPLETION SITE CLEANING

- A. Broom clean exterior paved surfaces. Rake clean other surfaces of the grounds.
- B. Power Wash, Hose down and scrub where necessary all concrete and walks dirtied as a result of the construction work. Thoroughly remove mortar droppings from all walks and pavements.
- C. Remove from the site all tools, equipment, construction waste, unused materials, excess earth, and all debris resulting from the Work.

3.05 DISPOSAL

- A. Conduct cleaning and disposal operations in compliance with all applicable codes, ordinances, regulations, including anti-pollution laws.
- B. Do not bury or burn rubbish or waste material on Owner premises.
- C. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
- D. Remove waste materials, debris, and rubbish from site and dispose of off-site.

3.06 INSPECTION

- A. Prior to Beneficial Occupancy, Substantial Completion or Final Completion; Contractor and Owner's Representative shall jointly conduct an inspection of sight-exposed interior and exterior surfaces to verify that entire Work is clean.

END OF SECTION 01 74 00

SECTION 01 75 00

STARTING AND ADJUSTING SYSTEMS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Starting Systems

1.02 REALATED SECTIONS

- A. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES
- B. Section 018200 – DEMONSTRATION AND TRAINING
- C. Section 019100 - COMMISSIONING
- D. Division 22
- E. Division 23
- F. Division 25
- G. Division 26
- H. Division 27

1.03 SUBMITTAL REQUIREMENTS

- A. Submit preliminary schedule listing times and dates for start-up of each item of equipment in sequence in writing, minimum of ninety (90) calendar days prior to any start-up.
 - 1. Start up, testing and Commissioning of equipment shall be integrated and coordinated with the contract schedule.
 - a. Adjustments will be made as project progresses, but the sequencing will be maintained.
- B. Submit manufacturer's representative reports within one (1) week after start-up, listing satisfactory start-up dates.
- C. Provide information, manufacturer and model number of all testing equipment to be used and current certification that the testing equipment has been calibrated within the last 6 months.
- D. Maintain log with dates and results of Starting and Adjustments, and provide electronic copy to Owner's Representative.

1.04 PROJECT CONDITIONS

- A. Building enclosure shall be complete and weather-tight.
- B. Excess packing and shipping bolts shall be removed.
- C. Interdependent systems shall have been checked and made operational.
- D. Permanent Power is connected and operational to the building.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify Project conditions comply with requirements for start-up.
- B. Verify status of Work meets requirements for starting equipment and systems.

3.02 PREPARATION

- A. Coordination: Coordinate sequence for start-up of various item of equipment.
- B. Notification: Notify Owner in writing, minimum of fourteen (14) calendar days prior to startup of each item of equipment.
- C. Contractor Quality Assurance Manager shall take the lead role for Starting and Adjusting the equipment; coordinate and work with the Owner's Representative and Inspectors throughout the entire process.
 - 1. Coordinate all start-up with the Commissioning Agent for the project.
- D. Information on hand: Have Contract Documents, shop drawings, product data, and operation and maintenance data at hand during entire start-up process.
- E. Verify each piece of equipment is anchored correctly per the manufacturer's requirements and the Contract Documents prior to energizing or starting.
- F. Verify each piece of equipment is connected to the correct power source, the breaker and conductors are the correct size. Overcurrent protection in place and required shut offs adjacent to the equipment are in place.
- G. Verify each piece of equipment has been checked for proper lubrication, drive rotation, belt tension, control sequence, and other conditions that may cause damage prior to energizing or starting.
- H. Verify control systems are fully operational in automatic mode.
- I. Manufacturer's Criteria: Verify tests, meter readings and specific electrical characteristics agree with electrical equipment manufacturers' criteria.

- J. Bearings: Inspect for cleanliness: clean and remove foreign matter, verify alignment. Take corrective action as required.
- K. Drives: Inspect for tension on belt drives, adjustment of vari-pitch sheaves and drives, alignment, proper equipment speed, and cleanliness. Take corrective action as required. Verify shaft grounding protection is in place.
- L. Motors: Verify motor amperage agrees with nameplate value. Inspect for conditions that produce excessive current flow and that exist due to equipment malfunction. Take corrective action as required. Verify shaft grounding protection is in place.

3.03 STARTING SYSTEMS

- A. Execute start-up under supervision of responsible Contractor personnel.
- B. Place equipment in operation in proper sequence in accordance with sequencing schedule and the contract schedule.
- C. Follow manufacturer's requirements and recommendations for Starting and Adjusting, including any Owner requirements that may be listed in the Contract and Construction Documents.
- D. Equipment manufacturers representatives shall be on site for Starting and Adjusting that equipment.
- E. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- F. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- G. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

END OF SECTION 01 75 00

SECTION 01 76 00

PROTECTION of EXISTING and INSTALLED CONSTRUCTION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Protection for Products Including Owner Provided Products, After Installation.
- B. Protection of Existing Utilities, Interference and Underground Structures.
- C. Protection of Existing Structures and Work adjacent to new construction and demolition.

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 015100 – TEMPORARY UTILITIES

1.03 EXISTING UTILITIES

- A. Known Utilities: Known existing utilities are shown on Contract Drawings in approximate locations. Contractor shall exercise care in avoiding damage to existing facilities. Contractor shall be responsible for repair of same if damaged through Contractor's action. Hand excavation shall be utilized when digging in close proximity to existing utilities. Owner does not guarantee that all utilities or obstructions are shown, or that locations indicated are accurate.
- B. As part of the Contract Work the investigation and excavation to locate existing utilities and underground structures shall be as follows, Contractor shall assume the existing known utility is within a 5 feet zone on either side of the location indicated on the Contract Documents. If the existing known utility is not located within a 5 feet zone on either side of the location indicated on the Contract Documents, the Contractor shall immediately notify the Universities Representative. The Contractor shall continue excavating until the existing utility is located. The Contractor shall be compensated for any additional excavation beyond the 5 feet zone on either side of the existing utility per 1.03D.
- C. Electrical Equipment: No work shall be performed on energized electrical equipment unless scheduled with Owner's Representative. Owner reserves right to specify specific conditions for all work involving energized high voltage electrical equipment and its scheduled modification proposal.
- D. Uncovering Facilities: Prior to any earthwork for new construction, Contractor shall uncover all existing piping where crossings, interferences or connections are shown on Contract Drawings, from one (1) foot below proposed construction limit to the existing ground surface. Any variation in actual elevations and indicated elevations shall be brought to Owner's Representative attention. If Contractor does not expose all existing utilities, Contractor shall not be entitled to additional compensation for work necessary to avoid unknown interferences.

- E. Interferences: If interferences occur at locations other than general locations shown on Contract Drawings, and such utilities are damaged before such locations have been established, or create an interference, Contractor shall immediately notify Owner's Representative and a method for correcting said interference shall be supplied by Owner. Payment for additional work due to interferences not shown on Contract Drawings shall be in accordance with the General Conditions of the Contract. Cost of repair to damaged utilities shall be deducted from the Contract Sum.
- F. Accuracy of Drawings: Drawings showing location of equipment, piping, etc. are diagrammatic and job conditions will not always permit installations in locations shown. When a conflict situation occurs, immediately bring to attention of Owner's Representative for determination of relocation.
- G. Deviations from Drawings: Information shown relative to existing power and signal service is based upon available records and data but shall be regarded as approximate only. Minor deviations found necessary to conform with actual locations and conditions shall be made at no change to the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PROTECTION AFTER INSTALLATION

- A. Installed Equipment and Materials: Adequately protect all installed equipment and materials until completion and acceptance by Owner's Representative.
- B. Existing Facilities: All existing areas, improvements and facilities shall be protected from damage of any type resulting from operations, equipment or workers of Contractor during the construction process.
- C. Subsequent Operations: Protect installed products and control traffic in immediate area to prevent damage from subsequent operations.
- D. Traffic Areas: Provide protective coverings at walls, projections, corners, and jambs, sills, and soffits of openings in and adjacent to traffic areas.
- E. Elevators: Cover walls and floors of elevator cabs, and jambs of cab doors, when elevators are used by construction personnel. Protect the elevator call buttons, switches, communication devices, lights, thresholds and other components.
- F. Moisture and Humidity Protection: Protect all new installed work and existing work per the manufacturer's requirements from moisture or humidity damage including but not limited to stored materials, finishes, gypsum board, insulation, doors, casework, millwork, equipment and all other building components.
- G. Finished Floors: Protect finished floors and stairs from dirt, wear, and damage:
 - 1. Secure heavy sheet goods or similar protective materials in place, in areas subject to foot traffic.

2. At all transitions to adjacent areas not under construction.
3. Lay rigid materials in place in areas subject to movement of heavy objects and where storage of products will occur. H. Waterproofed and Roofed Surfaces:
 1. Restrict use of surfaces for traffic of any kind, and for storage of products.
 2. When an activity is mandatory, obtain recommendations for protection of surfaces from manufacturer. Install protection and remove on completion of activity. Restrict use of adjacent unprotected areas.
 3. No Construction work shall be conducted on any unprotected roof weather new or existing.
 4. All pathways to work on the roof shall be protected.
- I. Lawns and Landscaping: Restrict traffic of any kind across planted lawn and landscaped areas.
- J. Adjacent Facilities: Care shall be exercised to prevent damage to adjacent facilities including walks, curbs, and gutters. Adequate protection shall be placed where equipment will pass over such obstructions, and facilities damaged by construction operations shall be removed and replaced at Contractor's expense.

3.02 Protection of Existing Structure and Work adjacent to new construction and demolition.

- A. The Contractor shall protect existing in place work at the exterior and interior, including but not limited to finishes, materials, products, utilities, fixtures, and equipment adjacent to new construction and demolition. Any existing in place work at the exterior and interior that is damaged by the Contractor shall be repaired or replaced at no extra cost to the Owner.
- B. Overloading: Contractor shall be responsible for overloading any part or parts of structures beyond the calculated capacities of the design. Placing materials, equipment, tools, machinery, or any other item shall be done with care to avoid overloading. No loads shall be placed on floors or roofs before they have attained their permanent and safe strength.
- C. Damaged Work: All damaged work shall be replaced, repaired, and restored to its original condition without change to the Contract Sum. Repair or replace all damaged work promptly as directed by Owner's Representative.
- D. Damaged Utilities: Where existing utilities are damaged or disrupted on account of any act, omission, neglect, or misconduct of the Contractor in the manner or method of executing the Work, or due to non-execution of work, such damage shall be immediately repaired to maintain operation regardless of the time of occurrence.
- E. Temporary Construction: Provide temporary construction necessary for protection of building and its parts. Close in buildings as soon as possible to protect from weather and vandalism. Protect existing buildings and controlled temperature areas from damage.

- F. Doors and Casework: Protect doors, millwork and mill counters and cases and hardware from damage, including abrading and scratching of finishes. Protect doors and frames and hardware from mechanical damage and damage to anodic coatings.
- G. Protective Coatings: Remove protective coatings, etc., as required to leave work in condition for painting and finishing, final cleaning, etc.
- H. Exterior Work: Protect all exterior work, including existing asphalt paving and landscaping and buildings.

END OF SECTION 01 76 00

01 77 00 CLOSE OUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Substantial Completion procedures.
 - 2. Final Acceptance Procedures.
 - 3. Final cleaning.
 - 4. Repair of Work

1.3 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Substantial completion: Prior to Substantial Completion, complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion.
 - 1. Notify Owner's Representative that project is ready for inspection. Participate with Owner in conducting inspection.
 - 2. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 3. Submit closeout submittals, including project record documents, operation and maintenance manuals, damage or settlement surveys, as-builts, and similar final record information.
 - 4. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

1.4 FINAL COMPLETION PROCEDURES

- A. Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Notwithstanding the "Payment to Contractor" provisions set forth in the General Conditions, submit a final Application for Payment according to Section 012900 "Payment Procedures." No later than seven (7) days after work is complete, conduct a post-dredge survey. Submit to Owner for review and approval.
 2. Certified List of Incomplete Items: Submit certified copy of Owner's Representative Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owner's Representative. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit final inspection report.
 4. Submit final completion photographic documentation.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Owner's Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection Procedure: The Engineer will reinspect the Work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Engineer.
 2. Upon completion of reinspection, the Engineer will prepare a certificate of final acceptance, or advise the contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 3. If necessary, reinspection will be repeated.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list items applying to each space by major element.
 2. Submit list of incomplete items.

PART 2 - PRODUCTS (not applicable)

PART 3 – EXECUTION

3.1 FINAL CLEANING:

- A. Conduct cleaning and waste-removal operations.

1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

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

3.2 REPAIR OF WORK

A. Complete repair and restoration operations, before requesting inspection for determination of Substantial Completion.

END OF SECTION

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Equipment Data

- B. Operation and Maintenance Instructions
- C. Instruction of Owner personnel
- D. Schedule of Submittals
- E. Spare Parts and Maintenance Materials
- F. Guarantees, Warranties, Bonds, Service and Maintenance Contracts
- G. Project As-built Documents

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Administrative general requirements for submittals.
- D. Section 014500 – QUALITY CONTROL: Manufacturer's tests and inspections as a condition of warranty.
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 016100 – PRODUCT REQUIREMENTS
- G. Section 017700 – CLOSEOUT PROCEDURES

1.03 FILE FORMATS

- A. All printed documents submitted per this section shall be in PDF format
 - 1. The PDF files will be unlocked and searchable.
 - 2. All PDF documents will be bookmarked.
 - 3. The exception to electronic format for As-Built drawings will be noted in the specific specification section where they are required.
- B. Digital Photography
 - 1. All files will be submitted in JPEG

1.04 EQUIPMENT DATA AND OPERATION AND MAINTENANCE (O&M) INSTRUCTIONS

- A. Preparation of data shall be done by persons:
 - 1. Trained and experienced in maintenance and operation of described products.
 - 2. Familiar with requirements of this Section.
 - 3. Skilled in technical writing to extent required for communication of essential data.
 - 4. Skilled as drafters competent to prepare required drawings

- B. O&M Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at time of Section Submittals. Submit reviewed manual content formatted and organized as required by this Section. Prepare in the form of a data and instructional manual.

- C. Submit PDF electronic files of operation and maintenance manuals. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to the Owner. The exception to electronic format will be indicated in the specific specification section requiring hard copies of the manual.
 - 1. Name each indexed document file in composite electronic index with applicable item name. Include a completed electronically linked operation and maintenance directory.
 - a. List Project title and Project number and particular building as applicable.
 - b. Enable inserted reviewer comments on draft submittals.
 - 2. Organization: Arrange content by systems under Section numbers and sequence in accordance with the Project Specifications Table of Contents.

- D. Table of Contents, Each Volume: Provide title of Project, Project number, with names, addresses, and telephone numbers of Owner's Representative, as applicable, and Contractor, including name of contact person. Provide schedule of products and systems, indexed to content of the volume.
 - 1. For each Product or System: List names addresses and telephone numbers of subcontractor, original supplier and manufacturer, as applicable, including name of contact person. Include name and address of local source of supplies and replacement parts.
 - 2. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete information not applicable.
 - 3. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project As-Builts Documents as maintenance drawings.
 - 4. Additional Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in SECTION 014500 – QUALITY CONTROL.
 - 5. Warranties and Bonds: Include in each applicable section.

- E. Manual for Materials and Finishes:

1. Building Products, applied Materials, and Finishes: Provide PDF composite electronically indexed file. Include product data, with catalog number, size, composition, and color and texture designations. Provide information for reordering custom manufactured Products.
2. Instruction for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
3. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
4. Additional Requirements: As specified in individual Specification Sections.
5. Table of Contents: Provide PDF electronic file with links to individual sections.

F. Manual for Equipment and Systems

1. Record Instructions: Forward to Owner's Representative, upon completion of work, and before work will be considered for acceptance, complete PDF composite electronically indexed file of instructions of entire plant and component parts, including manufacturer's certificates, warranty slips, parts lists, descriptive brochures, and maintenance and operating instructions, in quantities set forth in various Divisions. Submit drafts for review before preparing final PDF electronic file.
2. O & M Instructions: Provide and install, where directed, printed sheet under clear plastic cover, giving concise operating and maintenance instruction for equipment.
3. Each Item of Equipment and Each System: Inclusive description of unit or system, Model Number, Serial Number, and component parts. Identify function, normal characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts. Best to include all information provided in final approved equipment submittal. Design drawing shall be updated to reflect what was actually provided.
4. Panelboard Circuit Directories: Provide electrical service characteristics, controls and communications.
5. Wiring Diagrams: Include color-coded wiring diagrams as installed.
6. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and any special operating instructions.
7. Maintenance Requirements: Include routine procedures and guide for troubleshooting; disassembly, repair, and re-assembly instructions; and alignment, adjusting, balancing, and checking instructions. Provide servicing and lubrication schedules, and list of lubricants required.
8. Instructions: Include manufacturer's printed operation and maintenance instructions. Include sequence of operation by controls manufacturer.
9. Parts Data: Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
10. Control Data: Provide as installed control diagrams by controls manufacturer.

11. Piping Data: Provide Contractor's coordination drawings, with color piping diagrams as installed. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
 12. Design Data: Provide a listing in table of Contents for design data, with tabbed binder divider page and space for insertion of data.
 13. Reports: Include test and balancing reports as specified.
 14. Additional Requirements: As specified in individual Specification Sections.
- G. Instruction of Owner's Personnel: Instruct Owner designated personnel to their full and complete understanding, procedures necessary to operate and maintain equipment and systems on continuing basis. Provide training of staff.
1. Schedule: Before final inspection, instruct Owner designated personnel in operation, adjustment, and maintenance of products, equipment, and systems, at agreed upon times. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
 2. Basis of Information: Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
 3. Instructional Material: Prepare and insert additional data in the manual when need for such data becomes apparent during instruction.
- H. Equipment Data and Operation and Maintenance Instructions Submittals:
1. Submittals: Comply with administrative requirements specified in SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
 2. Preliminary Draft O&M Submittal: Submit electronic files of each manual at least 90 calendar days before commencing demonstration and training. Owner's Representative will review draft and return with comments.
 - a. The comments or corrections shall be incorporated into the Final O&M submittal.
 - b. Correct or revise each manual to comply with the Owner's Representatives comments. Submit electronic copies of each corrected manual within 15 calendar days of receipt of Owner's Representative's comments.
 - c. Owner's Representative will notify the Contractor when the edits have been accepted for incorporation into the final O&M submittal.
 3. Advance Submittals: For equipment, or component parts of equipment to be put into service during construction and operated by Owner, submit documents within ten (10) calendar days after equipment approval.
 4. Final O&M Submittal: After completion of instruction of Owner operation and maintenance personnel and final inspection, revise content of documents to include additional information deemed necessary from instruction experience of Owner's personnel and any changes made during construction. Submit each manual in the final form prior to requesting inspection for Substantial Completion. The Owner's Representative will return comments electronically.

- a. Submit electronic copies of each manual prior to requesting training.

1.05 SPARE PARTS, EXTRA STOCK AND MAINTENANCE MATERIALS

- A. Products Required: Where called for in Contract Specifications, deliver to Owner's Representative, materials, etc., for use in maintenance work. Provide list of materials delivered to Owner's Representative, indicating date and acceptance by Owner's Representative.
 1. Provide quantities of products, spare parts, maintenance tools, and maintenance materials specified in individual Sections to be provided to Owner's Representative, in addition to that required for completion of the Work.
 2. Products supplied shall be identical to those installed in the Work. Include quantities in original purchase from supplier to avoid variations in manufacture.
 3. Provide itemized list of all spare parts, materials and transmittal to the Owner's Representative for acceptance.
- B. Storage, maintenance: Store products with products to be installed in the Work, as specified in SECTION 016100 – PRODUCT REQUIREMENTS: Product Storage and Protection.
- C. Delivery to site: Prior to final payment, deliver and unload spare products to project site. Coordinate with Owner's Representative and obtain receipt. Owner will handle and store products.

1.06 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 1. List of Documents: Include a table of contents for each O&M and emergency, operations listed per CSI Specification number.
 2. List of Systems and Subsystems: Include references to operation and maintenance manuals that contain information about each system.
 3. List of Equipment: List equipment for each system, organized by system. For pieces of equipment not part of system, list separately.
 4. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists,

assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."
 5. This Directory shall be submitted to the Owner's Representative for review and acceptance.

1.07 MAINTENANCE AGREEMENTS

- A. Prior to Closeout all Maintenance Agreements required by the Contract Documents shall be assembled and submitted electronically with the Closeout Submittal Requirements.
 1. Provide all Maintenance Agreements in PDF form.

a. Submit individual files for each Maintenance Agreement with a directory assembled by CSI division.

- 1) Combine all project Maintenance Agreements including the directory into one PDF for record.
- 2) Files will be formatted for printing with a footer identifying the CSI number and Owner's project number.
- 3) There will be a front cover to the file that contains all project information including the Contractor contact information.

1.08 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties. D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

1.09 WARRANTIES AND GUARANTEES

A. Warranties and Guarantees, general: Guarantees from subcontractors shall not limit Contractor's warranties and guarantees. Whenever possible, Contractor shall cause warranties of subcontractors to be made

directly to Owner. If such warranties are made to Contractor, Contractor shall assign such warranties to Owner prior to final payment. When equipment and products, or components thereof, bear a manufacturer's warranty or guarantee that extends the time period of Contractor's warranty or guarantee, so state in the warranty or guarantee.

1. Standard Product Warranties: Preprinted written warranties published by individual manufacturers for particular products and specifically endorsed by manufacturer to Owner.
 2. Special Warranties: Written warranties required by or incorporated in Contract Documents, to extend time limits provided by standard warranties or to provide greater rights for Owner.
 3. Provisions for Special Warranties: Refer to General Conditions of the Contract for terms of Contractor's special warranty of workmanship and materials.
 4. Specific Warranty Requirements: requirements are included in the individual Sections of Division 2 through 49 of the Contract Specifications, including content and limitations.
 5. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractor's requirement to countersign special warranties with Contractor.
 6. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.
 7. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to original warranty with an equitable adjustment for depreciation.
 8. Replacement Cost: On determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents. Contractor shall be responsible for cost of replacing or rebuilding defective work regardless of whether Owner has benefited from use of the work through part of its useful service life.
 9. Owner Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which Owner can enforce such other duties, obligations, rights, or remedies.
 10. Rejection of Warranties: Owner reserves right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
 11. Owner reserves right to refuse to accept work where a special warranty, or similar commitment is required, until evidence is presented that entities required to countersign commitments are willing to do so.
 12. When designated portion of Work is completed and occupied or used by separate agreement with Contractor during the construction period, submit properly executed warranties to Owner's Representative within fourteen (14) calendar days of completion of that designated portion of the Work.
 13. Submit written guarantees, in the form contained at end of this Section.
- B. Form of Warranty or Guarantee: All written warranties and guarantees, excepting manufacturers' standard printed warranties and guarantees, shall be submitted on Contractor's, subcontractor's, material supplier's, or manufacturer's own letterhead, addressed to Owner. Warranties and

guarantees shall be submitted in duplicate and complying with the form letter following. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved by Owner to suit the conditions pertaining to the warranty or guarantee. C. Submission requirements:

1. Contractor shall collect and assemble required warranties, guarantees, bonds, and service and maintenance contracts. Provide PDF electronically signed or signed and scanned copies of each. Organize documents into an orderly sequence based on the table of contents of the Project Manual CSI divisions.
2. Table of Contents: Provide PDF electric file with links to individual warranty sections. Include the following information.
 - a. Product or Work item.
 - b. Product or work suppliers firm name, address, telephone number and name of principal.
 - c. Scope of guarantee, bond, service or maintenance agreement.
 - d. Date of beginning of guarantee, bond, service or maintenance contract.
 - e. Duration of guarantee, bond, service or maintenance contract.
 - f. Contractor's name, address, telephone number and name of principal.
 - g. Provide information for Owner personnel:
 - 1) Proper procedure in case of failure.
 - 2) Circumstances that might affect validity of guarantee or bond.

D. Warranty Submittal

1. Provide all warranties in PDF composite electronically indexed files.
 - a. Submit individual files for each warranty with a directory assembled by CSI division.
 - 1) Combine all project warranties including the directory into one PDF for record
 - 2) Files will be formatted for printing with a footer identifying the CSI Number and Owner's Project Number.
 - 3) There will be a front cover to the file that contains the title "WARRANTY, GUARANTEE AND BOND" as well as all project information including the Contractor contact information. Title of Project and UC Davis Health Project Name and Number.
 - 4) Coordinate copies of each warranty to be included in operation and maintenance manuals.
 - 5) Final Submittal shall be incorporated into one PDF, bookmarked and searchable document.

F. Time of Submittals: Submit 60 calendar days prior to request for final payment. When work activity is delayed materially beyond date of Substantial Completion, provide updated submittal within ten (10) calendar days after Final Completion, listing date of Final Completion as the start of the Guarantee period.

1.10 AS-BUILT DOCUMENTS

A. Definitions:

1. The terms "As-Built Documents" or "As-builts" shall mean the marked-up version of the Contract Documents prepared by Contractor to record as-built conditions, changes, and selections made during construction.

B. Preparation of data shall be done by person(s):

1. Trained and experienced in the maintenance, preparation, and submittal of AsBuilt Documentation.
2. Familiar with requirements of this Section.

C. As-built Documents Content:

1. As-built Drawings and Specifications
2. As-built Schedule
3. Miscellaneous As-Built Submittals

D. As-Built Drawings and Specifications: Provide a complete set of As-Built Drawings and Specifications, showing and noting every change from the Contract Set, including but not limited to:

- Changes made in response to RFI's
- Amended Construction Documents (ACD) and related RFI's ☐ Change Orders/Field Orders and related RFI's.
- Architect's Supplemental Information (ASI) and related RFI's.
- Changes to locations, including access panels, windows, doors, plumbing, etc.
- Changes caused by obstructions and the obstructions notated
- Changes made in response to inspections
- Final dimensions
- Deferred Submittals (see "Miscellaneous As-Built Submittals" below)
- Shop Drawings (see "Miscellaneous As-Built Submittals" below)
- Final product selections

1. Format Requirements:

- a. Provide in PDF format with bookmarks. All annotations shall be neat and legible.
- b. File naming conventions:
 - 1) Drawings: YY_MMDD_Owner's Project Number_AsBuilt_Dwgs

- 2) Specifications: YY_MMDD_Owner's Project Number_As-Built_Spec
 - c. Provide text (preferably 1/4" or larger) on each drawing and on the cover of the specifications indicating the submission date, the Owner's Project Number, and the term "As-Builts". The text shall be the same size and general location on all sheets of the drawings and care should be taken to locate the text in a place as to not obscure text or linework on the drawings.
 - d. Bookmarks: Provide bookmarks in the following format:
 - 1) Drawings: Sheet Number – Sheet Name. Do not add additional categories or disciplines.
 - 2) Specifications: The first page of each section shall be bookmarked with: Section Number – Section Name.
 - Exception: If a hyperlinked Table of Contents is provided the bookmarks may be excluded.
 - e. Supplemental sheets: When adding a supplemental sheet containing sketches or other information that describe changes to the Contract Documents:
 - 1) Provide a two-digit numerical suffix that starts with .01 and ascends for every supplemental sheet:
Example: If the supplemental sheet contains sketches that describe changes to the hypothetical sheet "A1-01" the first supplemental sheet will be numbered "A1-01.01".
 - 2) The sheet name and number are to be similar in text size and location to the sheet being supplemented.
 - 3) Include supplemental sheets in bookmarks.
- E. As-Built Schedule: Provide As-Built schedule per SECTION 013200 CONTRACT SCHEDULES
1. Format Requirements:
 - a. Schedule to be in PDF format.
 - b. File naming conventions:
 - 1) YY_MMDD_Owner's Project Number_As-Built_Schedule
- F. As-Built Shop drawings:
1. Format Requirements:
 - a. File naming convention for shop drawings:
 - 1) YY_MMDD_Owner's Project Number_ShopDwg_Spec Section Number
- G. As-built Documents Submittal: Submit all As-Built Documents together after Final Completion and in accordance with SECTION 017700 CLOSEOUT PROCEDURES. Allow 10 business days for initial review and for each resubmittal.

1.11 AS-BUILT PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
1. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
2. Format: Submit Product Data as annotated PDF electronic file Include As-Built Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.
- 3.

1.12 PHOTOGRAPHS

A. General: Prior to Closeout all photographic documentation required per 013220 Construction Progress Reporting shall be assembled and submitted with the Closeout Submittal Requirements.

1.13 CONSENT OF SURETY AND FINAL CERTIFICATES

A. General: Prior to closeout Consent of Surety and Final Certificates required by the Contract Documents shall be assembled and submitted with the Closeout Submittal Requirements.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Guarantee
- B. Report of Work Required by Warranty

END OF SECTION 017800

GUARANTEE

Project Title: _____

Project Location: _____

Project Number: _____ DATE: _____

GUARANTEE FOR _____ (the "Contract"),

(Specification SECTION and
Contract No.) between The County of Lake ("Owner") and_____
("Contractor").

(Name of Contractor or Subcontractor)

hereby guarantees to Owner that the portion of the Work described as follows:

which it has provided for the above referenced Project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specification SECTION _____ and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____ months after the date of the guarantee the undersigned receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize Owner to undertake such correction, repair, or replacement at the expense of the undersigned; and Contractor will pay to Owner promptly upon demand all costs and expenses incurred by Owner in connection therewith.

SUBCONTRACTOR

Signed: _____ Title: _____

Typed Name: _____

Name of Firm: _____

Contractor License Classification & Number: _____

Address: _____

Telephone Number: _____

CONTRACTOR

Signed: _____ Title: _____

Prepared by:

_____	_____	_____
(Print Name)	Signature	Date

In accordance with the terms and conditions of the Contract, the **Contractor** has agreed that, if at any time within _____ months after _____ the date of the guarantee the **Contractor** receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the **Contractor** will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

Prompt notification to be provided by the Owner Representative to the appropriate **Contractor**.

SECTION 01 82 00

DEMONSTRATION AND TRAINING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Demonstration of Equipment Operation and Instruction of Owner Personnel.

1.02 RELATED SECTIONS

- A. Section 017800 – CLOSEOUT SUBMITTALS
- B. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES

1.03 SUBMITTALS

- A. Submit preliminary schedule for Owner Representative approval, listing times and dates for demonstration of each item of equipment and each system, in writing, minimum of thirty (30) calendar days prior to activities.
- B. Submit reports and videos within (14) calendar days after completion of demonstrations and instructions. Give time and date of each training session, and hours devoted to training with a list of persons present and the corresponding video.

1.04 QUALITY ASSURANCE

- A. Equipment installed under Contract shall operate quietly and free of vibration. Adjust, repair, balance properly, or replace equipment producing objectionable noise or vibration in occupied areas of building. Provide additional brackets, bracing, etc., to prevent such noise or vibration. Systems shall operate without humming, surging or rapid cycling.
- B. Owner will provide list of personnel to receive instructions and will coordinate their attendance at agreed-upon time.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PREPARATION

- A. Verify equipment has been inspected, commissioned, and put into operation.
- B. Send approved pdf version of completed operation and maintenance manual 7 calendar days prior to training.

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

3.02 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of equipment and systems to Owner two (2) weeks prior to date of final inspection. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
- B. Use operation and maintenance manuals as basis of instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance. Display on a video screen and demonstrate the use of bookmarks and searches to find information being sought.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times, at equipment location.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

END OF SECTION 01 82 00

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DEMONSTRATION AND TRAINING

SECTION 01 91 00

COMMISSIONING

PART I - GENERAL

1.01 SUMMARY

- A. Commissioning (Cx) is the process of ensuring that all building systems are installed and perform interactively according to the design intent; those systems are efficient, cost effective and meet the Owner's Project Requirements and operational needs; that the installation is adequately documented; and that the operations staff are adequately trained. This is achieved by a full understanding of all building systems through construction, acceptance and warranty period with actual verification of performance. It also establishes testing and communication protocols in an effort to advance the building systems from installation to full dynamic operation and optimization.
- B. The Commissioning process does not relieve responsibility of the Contractor to provide a finished and fully functioning Project. The Contractor and Subcontractors provide the quality control for installation and start-up of the building systems.
- C. The specified commissioning activities shall demonstrate compliance with the Owner and California Code Commissioning requirements.
- D. Commissioning is a condition of the Contract and shall not be excluded from the base bid.
- E. Commissioning requirements extend to all alternates and change orders, as well as all subcontracts and purchase orders for work under the Contractor's control. F. Related Documents:
 - 1. Division 00 Procurement and Contracting Requirements, apply to this Section.
 - 2. Drawings and general provisions of Contract, and other Division 01 Specification Sections, apply to this Section.
 - 3. Technical Divisions of the Specifications apply to this Section.

1.02 DEFINITIONS

- A. Acceptance Phase: This is the phase of the project when the facility and its systems and equipment are inspected, tested, verified, and documented, and when most of the Functional Performance Testing (FPT) and final training occurs. This will generally occur after the Construction Phase is complete (i.e., start-up and checks have been accomplished). The Acceptance Phase typically begins with certification by the Contractor that the systems have been started in accordance with the approved protocols and the submission of the documentation of that start-up. The Acceptance Phase ends with the successful completion of all FPT and sign-off by the CA and the Owner.
- B. Action Item: Any issue that requires a response, completion, corrective or additional work, or any other action. Examples include a Request for Information (RFI), a work directive, a clarification request, a to-do item, an identified deficiency, or any other like item. Actions Items must be categorized as appropriate.

- C. Action List: This is a list that is maintained and updated by the CxA that includes all Action Items that relate to Cx activities.
- D. Commissioning (Cx): The process of ensuring that all building systems perform interactively according to the design intent and that the system operations are efficient and cost effective and meet the Owner's functional needs.
- E. Commissioning Agent (CxA): The individual retained by the Owner who will oversee the Cx process, develop and stipulate many of the Cx requirements (including FPTs), manage the Cx process, and ensure and verify that systems and equipment are installed, and tested to meet the Owner's requirements.
- F. Commissioning Coordinator (CC): The Contractor shall provide a Commissioning Coordinator. The CxA, the Owner's Representative and the CC will comprise a commissioning management team. While the CxA leads the overall commissioning process, the CC is responsible for managing contractors in their day-to-day performance of the specified commissioning work. The CC is an employee of the Contractor who is regularly and frequently on site. Qualifications for the Commissioning Coordinator include experience and excellent abilities to schedule, coordinate and manage subcontractors. The following tasks are some of the critical items included in the CC's scope of work:
 - 1. Integrating the specified commissioning activities into the overall contract construction schedule, updating the schedule and providing three-week lookahead schedules showing the upcoming commissioning related activities.
 - 2. Providing all commissioning submittals to the Owner's Representative and CxA.
 - a. O&M Manuals per Division 017700 Close-out Procedures and 017800 Close-out Submittals
 - 3. Coordinating Owner training and ensuring that training is provided in accordance with the Division 017700 Close-out Procedures and the technical specifications.
 - 4. Ensuring that subcontractor and supplier review and complete the CxA provided FPT procedures and forms then submitted in accordance with the specifications. This includes providing written comments (even if no exception is taken) regarding issues pertaining to safety, equipment protection/warranty and appropriateness of the procedure for the systems as provided from all required FPT participants for each FPT.
 - 5. Coordinating development and submittal of specified flushing, cleaning and startup procedures and ensuring that these procedures are completed, and documentation is submitted.
 - a. Providing test reports and progress reports in accordance with the 017800 Close-out Submittals, commissioning, and technical specifications.
 - 6. Managing the Contractor participation in the FTP process in accordance with the commissioning specifications.
 - 7. Managing the Contractor participation in resolution of issues identified during pre-commissioning meetings and during the commissioning process.
 - 8. Ensuring that subcontractors perform preliminary testing to verify readiness for final FPT demonstrations, submitting documented verification that systems will pass functional tests

with acceptable results as documented in the FPTs and coordinating the demonstration of the FPTs to the Owner and the CxA.

9. Coordinating repeat FPTs that fail due to contract deficiencies until acceptable results are achieved and managing the reimbursement of the Owner's costs for repeated tests in accordance with the commissioning specifications.
- G. Commissioning Plan: This is a detailed document prepared and maintained by the CxA that describes the entire commissioning process.
 - H. Commissioning Specifications (Cx specs): Includes the Cx specification section and Cx-related subsections of other specifications. All Contractor requirements relating to Cx.
 - I. Commissioning Team: The parties involved in the commissioning process for any given system. The Cx Team will include a core group involved with all systems. This core group will typically include the CxA, the Owner's Cx coordinator, and Contractor CC and/or MEP Coordinator. At any given point the team may include the project manager, members of the design team, the project inspector, product representatives, and operation and maintenance personnel.
 - J. Contractor: As used herein, Contractor is a general reference to the installing parties and can therefore refer to the Contractor, the subcontractors, or vendors as inferred by its usage.
 - K. Construction Phase: Phase of the project during which the facility is constructed and/or systems and equipment are installed and started. Contractor and subcontractors complete the installation complete start-up documentation, submit O&M information, establish trends, and perform other applicable requirements to get the systems started. The Construction Phase will generally end upon completed start-up and TAB of systems and equipment.
 - L. Contract Documents: The documents governing the responsibilities and relationships between the parties involved in the construction of the project including, but not necessarily limited to, the agreement/contract, construction plans and drawings, specifications, addenda, and change orders.
 - M. Deficiency: A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents.
 - N. Functional Completion: A milestone that marks the completion of the Acceptance Phase and successful documentation of the FPTs by the CxA.
 - O. Functional Performance Testing (FPT): This process verifies that the systems within the commissioning scope function in accordance with the Contract Documents, the Owner's design intent and the Design Team's Basis of Design. The process includes the documented testing of the systems under actual and simulated operating conditions. Functional Performance Test (FTP) procedures are detailed instructions that allow experienced system technicians to perform the FPTs with repeatable results. The repeatability of the procedures and results validate the tests. Final performance testing of systems will begin only after the Contractor certifies that such systems are completely installed and ready for functional testing and after the CxA has completed the subsequent installation verification process for the systems to be tested.
 - P. Installation Verification Process: This process includes the on-site review of related system components for conformance to the Contract Documents. Upon receipt of the completed Contractor's System Readiness Manual, the CxA will conduct this review and verify system readiness for final functional testing procedures. The CxA will document issues identified during this process and assign them to the appropriate party for resolution.

- Q. MEP Coordinator: Contractor's staff member who is responsible for all MEP equipment and system installation, coordination, and start-up is the primary contact for the Cx Agent and shall be responsible to organize and lead the start-up and commissioning meetings, tracks response to Action Items from Cx Agent and generate minutes.
- R. Ready to Commission statement: The subcontractor's written statement, through the System Readiness Checklist (SRC), that the equipment or system described has been completely installed, started, and tested to ensure that it has met all the requirements of the contract documents and is ready for commissioning.
- S. Start-up: Refers to the quality control process whereby the Contractor verifies the proper installation of a device or piece of equipment, executes the manufacturer's starting procedures, completes the start-up checklists, energizes the device, verifies it is in proper working order and ready for dynamic testing, and completes the start-up tests.
- T. System Readiness Checklists (SRCs): These checklists are provided by the CxA and include equipment installation and start-up items specified to be performed and verified by the Contractor. These checklists shall be compiled along with associated start-up forms by the Contractor to create the Contractor's System Readiness Plan. They shall be completed during installation and returned to the CxA as components of the Contractor's System Readiness Manual prior to the final CxA installation verification and functional performance testing process.
- U. System Readiness Manual: This document includes, for each system within the commissioning scope of work, completed and signed versions of each form submitted by the Contractor's.
- V. System Readiness Plan: This document shall be completed by the Contractor and submitted to the CxA prior to the final installation verification and functional performance testing process. By submitting these completed forms, the Contractor signals that the relevant systems are installed, operational and will meet functional testing acceptance criteria. The System Readiness Plan is compiled by the Contractor and includes, for each system within the commissioning scope of work, the System Readiness Checklists provided by the CxA, followed by the associated Contractor's Start-up and Test Forms. The Contractor System Readiness Plan shall be submitted to the CxA for review and approval prior to installation of the systems.

1.03 REFERENCES

- A. American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE):
 - 1. ASHRAE Guideline 0-2013, The Commissioning Process
 - 2. ASHRAE Guideline 1.1-2007, HVAC&R Technical Requirements for The Commissioning Process.
 - 3. ASHRAE Standard 202-2013, Commissioning Process for Buildings and Systems
- B. US Green Building Counsel (USGBC), Leadership in Energy and Engineering Design (LEED):
 - 1. Reference Guide for the version of LEED pursued by project.
- C. California Building Standards Code (California Code of Regulations, Title 24):
 - 1. Part 6, Building Energy Efficiency Standards for Residential and Nonresidential Buildings

2. Part 11, CALGreen

1.04 SYSTEMS TO BE COMMISSIONED

- A. All systems and equipment identified in the contract documents as having quality assurance or acceptance testing requirements are included in SYSTEMS TO BE COMMISSIONED by reference.
- B. All systems and equipment identified in the contract documents as requiring startup are included in SYSTEMS TO BE COMMISSIONED by reference.
- C. All systems and equipment identified in the contract documents requiring training are included in SYSTEMS TO BE COMMISSIONED by reference. D. Commissioning shall be system based.
 - 1. Equipment and sub-assemblies are to be installed, started, and tested as components of each respective system rather than as a category of equipment or by specification section.
- E. The systems to be commissioned shall include but are not limited to the following:
 - 1. Air Handling Units
 - 2. Exhaust Fans
 - 3. HTHW Heat Exchangers
 - 4. Pumps
 - 5. Fan Coils
 - 6. Terminal Devices (VAV boxes)
 - 7. Sump Pumps
 - 8. Air Transfer Fans
 - 9. Hot Water Heaters
 - 10. Building Control System - Direct Digital Control System
 - 11. Energy Management System
 - 12. Hydronic Systems
 - 13. Heat Exchangers
 - 14. Automated Lighting control systems
 - 15. Emergency generators
 - 16. Transfer switches
 - 17. Utility Meters and sub-metering system

18. VFDs
19. Power to Mechanical Systems
20. Lighting Inverter
21. Irrigation Systems
22. Solar Photovoltaic Power Systems
23. Domestic Hot Water Systems
24. VRF Systems
25. Radiant Heaters
26. Heat Recovery boxes
27. Irrigation systems
28. Renewable Energy Systems
29. Fire alarm / Fire Detection System.
30. Data Systems.
31. Audio/Visual Systems.
32. Intercom / Telecom Systems.
33. Miscellaneous Low Voltage Systems.
34. Other Systems as Specified.

1.05 CONSTRUCTION AND ACCEPTANCE PHASE COMMISSIONING

- A. The Contractor will be an active participant in the construction and acceptance phase commissioning activities. The commissioning tasks and responsibilities include following:
 1. Respond to requests from the CxA for interpretation/clarification of equipment selection and sequence of operation during functional performance test development.
 2. Review, and provide direction as necessary on, the functional performance tests developed by the CxA for conformance with the design intent, within an agreed time interval.
 3. Supporting the commissioning process by diligently executing the contract requirements to provide a fully functional facility ready for testing and working closely with the commissioning team to integrate the commissioning process into the project delivery schedule.
 4. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.

5. Cooperate with the CxA for resolution of issues recorded during the commissioning process.
6. Schedule and attend commissioning kick-off meeting and commissioning coordination meetings.
7. Integrate and coordinate commissioning process activities with construction schedule.
8. Develop quality assurance process to verify and document proper installation, access, startup, adjusting, check out and maintenance of commissioned systems.
9. The CxA will develop the System Readiness Checklist (SRC) forms for each system within the commissioning scope of work. These forms summarize specific aspects of the installation of each system that the Contractor must verify prior to conducting functional performance testing. The SRC forms will be submitted to the Contractor and subcontractors for review and comments and subsequently compiled into the System Readiness Plan.

As part of the commissioning submittals, the Contractor shall submit a System Readiness Plan to the CxA. This document is typically a binder organized into sections with one section per system, each of which includes the SRC for that system followed by Manufacturer – or installation subcontractor-provided installation checklists, detailed start-up procedures, blank TAB forms and other project specific test forms. The CxA will review the System Readiness Plan and document any missing or erroneous forms. After the Contractor provides the correct forms, the CxA will provide final approval and acceptance of the System Readiness Plan for use by the Contractor and/or installation subcontractors. Once approved, the System Readiness Plan is subsequently referred to as the System Readiness Manual.

10. Review and accept commissioning functional performance test procedures provided by the CxA.
11. Ensure cooperation and participation of specialty subcontractors.
12. Provide to CxA a completed Functional Verification Checklist certifying that for all (listed) systems and equipment to be commissioned, that all systems, subsystems, equipment, and controls are ready for testing.
13. Ensure participation of major equipment manufacturers in appropriate training and testing activities.
14. Execution of the Functional Performance Test protocols for CxA to witness.
15. Manage every aspect of the training program including being responsible for all training requirements. An outline of the training requirements shall be developed with the Owner and CxA.
16. Responsible for developing and implementing a formal equipment maintenance program to ensure that all equipment specified to be installed on the project is received and maintained in good working order until accepted by the Owner.

1.06 SUBMITTALS

- A. The Contractor shall provide the CxA a list of required equipment/system submittals to the CxA. The CxA will identify submittals to be submitted to the CxA concurrent with submission to the Owner's Representative for review.
- B. The Contractor shall provide the CxA the requested submittals for the CxA concurrent review, with submission to the Owner for review
- C. One set of searchable and bookmarked electronic file of coordination drawings which includes all commissioned systems e.g., mechanical, electrical, fire protection, plumbing, and telecom.
- D. Names of Contractor and subcontractor's personnel who will be responsible for the startup and commissioning of the facility. To include names, email, and telephone contact information.
- E. Start-up and commissioning schedule. To include detailed plan of the sequence of construction with start and completion dates for each phase.
- F. Start-up forms for equipment and systems installed in the building. Documents to be used by sub-contractors to ensure that the building complies with the requirements of the contract documents.
- G. All Subs, through the Contractor, shall submit required installation, start-up, and preventive maintenance equipment data sheets to the CxA within 45 calendar days of equipment acceptance by the Owner.
- H. All Subs, through the Contractor, shall submit initial O&M data for system and equipment being commissioned under this specification. Initial O&M data shall be submitted within 45 calendar days of equipment acceptance by the Owner, but no less than 8 weeks prior to the beginning of functional testing.
- I. The Contractor shall submit an electronic copy of the construction meeting minutes, updated construction schedule, RFI log, and Bulletin log to the CxA within seven (7) calendar days of each meeting or update.
- J. Contractor shall submit an electronic copy of training plan and training materials to the CxA for review and approval prior to providing training.
- K. Consolidated close out list with all training, Final O&M manuals, As-Built documentation and surplus stock listed by spec section. Information to be compiled from the specifications.

PART II - PRODUCTS

2.01 TEST EQUIPMENT

- A. The Contractor shall supply all personnel and equipment for the demonstration and testing, including, but not limited to, tools, instruments, ladders, lifts, computers, software, cables, etc. Contractor supplied personnel must be competent with and knowledgeable of all project-specific systems, and automation hardware and software. All training documentation, O&Ms, and submittals shall be at the job site before functional testing commences.
- B. All standard testing equipment required to perform startup and initial checkout and required functional performance testing shall be provided by the division contractor for the equipment being

tested. For example, the mechanical contractor of Division 23 shall ultimately be responsible for all standard testing equipment for the HVAC system and control systems in Division 23.

- C. Special equipment, tools and instruments (only available from vendor/Subs, specific to a piece of equipment) required for testing equipment, according to these Contract Documents shall be provided by the Contractor and left on site, for the CxA to use during functional testing, seasonal testing, and deferred testing. The equipment, tools, and instruments will be returned to the vendor/Subs after successful conclusion of the commissioning effort.
- D. The controls contractor shall provide the CxA with temporary software license to be loaded on the CxA's computer, and any necessary network connection cables, for accessing the direct digital control system field panels for system testing. The controls contractor shall also provide a palm device (if applicable) with attachments, software, and cables, to check setpoint values of terminal device controllers. The controls contractor shall provide the CxA with log on ID, password, and LAN IP connection criteria for remote connection to direct digital control system. All the software, cables, and modems provided to the CxA will be returned at the successful conclusion of the commissioning effort.
- E. All testing equipment used by the contractors shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Contract Document Specifications (Project Manual). If not otherwise noted, the following minimum requirements apply to test and measurement equipment: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.1°F and a resolution of $+ \text{ or } - 0.1^{\circ}\text{F}$. Pressure sensors shall have an accuracy of $+ \text{ or } - 2.0\%$ of the value range being measured (not full range of meter) and have been calibrated within the last year. All equipment shall be calibrated according to the manufacturer's recommended intervals. Calibration tags shall be affixed or certificates readily available.

PART III - EXECUTION

3.01 AFTER AWARD OF CONTRACT

- A. The Contractor shall identify the person on their staff who will serve as the Commissioning Coordinator (CC). This person shall be responsible for all startup and commissioning issues on the project. Specific duties are identified in Part 1 of this Section.
- B. Within the first 30 calendar days of the project the Contractor shall meet with the Owner and the commissioning agent to discuss the process to be used on the project for managing communication to and from the Cx agent. This is to include the means for communication issues, commissioning reviews, processing submittals, RFIs, change orders, etc., meeting minutes, schedule information, Cx agent observations, and the action item lists. If a mutually agreeable process cannot be agreed upon, the Cx agent's process and software tools will be utilized.
- C. Within the first 60 days of the project there will be a meeting of the GC, the Cx agent and the key subcontractor's personnel to review how the Cx process will be implemented on the project and how the communication and documentation requirements will be met. The subcontractors are expected to send the staff that will be participating in the start-up and commissioning meetings.
- D. The Contractor will submit a schedule listing the key startup and Cx activities. The initial schedule can be general in nature. As the project progresses, the details on the schedule must be sufficient to list the activities of each Contractor for each phase of the project and what work must be accomplished before each listed task.

- E. The Contractor is to identify the team members from each subcontractor who will be participating in the start-up and commissioning meetings. This list is to include the name and contact information for the subcontractor's commissioning coordinator.
- F. The Contractor is to compile a listing of all factory tests that will take place prior to the start of the start-up and commissioning meetings. The consolidated list, along with an approximation of when they are expected to take place, shall be forwarded to the Cx agent.

3.02 Cx MEETINGS

- A. Eight weeks prior to supplying potable water to the building or the permanent power, the Commissioning Coordinator (CC) will schedule the first start-up and commissioning meeting. The meetings will not be concurrent with the Contractor's MEP coordination meeting and are to be scheduled at a mutually agreeable time between the Contractor, the Cx agent, and the Owner.
- B. The meetings will initially be held every second or third week as appropriate, and then increase in frequency to weekly as the bulk of the start-up and commissioning work is taking place.
- C. During each meeting an updated start-up and commissioning schedule will be distributed. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- D. During the meetings a consolidated training, O&M, and attic stock list drawn from the contract document requirements will be distributed. Decisions on the O&M review, when the training will take place, and how the stock will be turned over the Owner will be made based on this document. In addition to the hard copies distributed at the meeting, an electronic version shall be forwarded to the Cx agent and the Owner.
- E. Minutes of the start-up and commissioning meetings will be generated and distributed by the Commissioning Coordinator (CC). The minutes are to incorporate findings from the Cx agent. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- F. The updated FPTs will be provided to the Contractor by the Cx agent.
- G. The Contractor and the subcontractors will be required to coordinate their activities, and work collaboratively, with the test and balance contractor hired by the Owner.
- H. The Contractor will coordinate the schedules for two review meetings to be led by the Cx agent. The first will be a comprehensive test and balance review and needs to include the mechanical subcontractor's wet and dry side foreman. The second meeting will be a controls review. This meeting is to be attended by the controls subcontractor's lead on the project and the programmer. Each meeting is to last at least two hours.

3.03 FIELD START-UP AND TESTING

- A. The dates for all field start-up activities shall be listed on the start-up and commissioning schedule.

- B. The CxA works with the Subs in developing startup plans and startup documentation formats, including providing the Subs with pre-functional checklists to be completed, during the startup process.
- C. The TAB contractor submits their TAB plan, along with the TAB Plan Review Checklist, for approval by the CxA prior to starting TAB work.
- D. In general, the checkout and performance verification proceeds from simple to complex, from component level to equipment to systems and intersystem levels with pre-functional checklists being completed before functional testing.
- E. The CxA shall review shop drawings and material certifications, review of reports from independent testing agencies, independent on-site periodic construction observation and attendance of selected quality control-related meetings (e. g., Pre-installation Conferences).
- F. Pre-Functional Test Phase:
 - 1. The Contractor shall prepare the equipment and systems for start-up in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. Start-up shall be performed by the Contractor's and/or manufacturer's start-up technicians in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. The Contractor shall test the systems to verify that they perform in accordance with the Contract Documents, including the commissioning FPT procedures.
 - 2. The CxA will witness equipment start up and testing. The Contractor shall notify the CxA in writing at least fourteen (14) calendar days in advance of the start-up and testing dates so that the CxA can schedule attendance. If the CxA is not notified in advance of a scheduled start-up or testing activity, the start-up or testing shall be rescheduled and repeated to the satisfaction of the CxA. When scheduled start-up activities are not executed because of lack of preparation or coordination by the Contractor, the Contractor will be subject to back-charges in accordance with the Contract Documents.
 - 3. The Contractor shall complete and compile all start-up forms, test forms and SRCs for the System Readiness Manual and submit to the CxA.
 - 4. Upon receipt of the completed System Readiness Manual forms, the CxA will perform an Installation Verification by providing various inspections and backchecks of the completed System Readiness Manual forms. Issues notes during this process will be documented by the CxA in the Commissioning Issues Log.
 - 5. Upon acceptance of the System Readiness Manual, which includes the draft TAB report, functional performance testing shall be scheduled. Functional performance testing shall not commence until all critical issues identified during the Installation Verification process are resolved.
- G. Upon completion of the start-up and contractually required work, the Contractor shall submit a 'Ready to Commission' document to the Owner for the Specific Equipment and/or system that is complete. It is only after this document is received that the FPTs will commence.

3.04 Functional Performance Testing:

- A. Functional Performance Testing of commissioned systems shall begin after all critical issues discovered during the installation verification process have been corrected.
- B. The procedure for developing and performing the FPTs shall be as follows:
 1. The Contractor shall provide the equipment and commissioning submittals as specified in the Contract Documents.
 2. The Commissioning Authority will draft the FPT procedures based on the Contractor's submittals as approved by the Design Team. The draft procedures will be submitted to the Commissioning Team for review.
 3. Each Contractor and equipment supplier that is specified as an FPT participant in the FPT Summary Tables in the specifications shall participate in the development and performance of the associated FPTs. Each FPT participant shall provide written comments on the associated FPT procedures regarding each of the following issues:
 - a. Verify that the procedures can be performed without compromising the safety of the participants.
 - b. Verify that the procedures can be performed without compromising the warranties of equipment, components, and systems.
 - c. Verify that the procedures are appropriate for the equipment, components and systems as provided.
 4. The CxA will complete the working drafts of the FPT procedures.
 5. Subcontractors and suppliers shall provide the personnel, expertise and test equipment to operate and maintain the systems during testing.
 6. The Contractor shall test all systems within the commissioning scope of work, using the FPT procedures until the acceptable results specified in the FPT procedure are verified and documented. If necessary to obtain acceptable results, the Contractor may consult with the CxA to acquire clarification and resolve issues. The CxA will be available for on-site assistance of this nature.
 7. The Contractor shall submit documentation that verifies that the acceptable results specified in the FPT procedures have been verified and that they are ready to demonstrate the FPTs with acceptable results. Acceptable documentation consists of completed FPT record forms which document acceptable FPT results or indication on the Systems Readiness Checklists that the Contractor's pre-functional testing has verified that functional performance testing of the equipment and associated system demonstrate the acceptable results as specified.
 8. After the CxA has accepted the Contractor's documentation of acceptable results, the FPT shall be conducted and demonstrated to the CxA. If acceptable results are not demonstrated for an FPT, the Contractor shall resolve the issue(s) and the demonstration shall be repeated.
 9. The Contractor shall verify and document acceptable FPT results for all equipment components and systems. The FPTs may be demonstrated for a sample of the systems that

comply with all of the following criteria. This process is referred to in this document as "demonstration sampling".

- a. There shall be many of the systems with similar components that have identical sequences of operation which are implemented using identical control software programming.
 - b. The components and systems to be included in the Demonstration Samples will be chosen by the CxA at the time of demonstration.
 - c. The sample size will be in accordance with the Functional Performance Test (FPT) Demonstration Sampling Tables in the specifications.
 - d. Acceptable results must be demonstrated for the entire sample. If the FPT results are not acceptable due to a lack of preparation or coordination by the Contractor for any system or component sampled, the FPT shall be demonstrated for all the systems and components for which it was written. Whenever the demonstrated results are not acceptable, the Contractor shall make corrections and the FPT shall be demonstrated again. The cost of back-checking FPTs with unacceptable results is not included in the Commissioning Authority's scope of work. Back-charging applies to additional back-checking required due to lack of preparation by Contractor.
10. The CC is responsible for scheduling and coordinating functional testing activities. The Contractor shall demonstrate the FPTs after they have verified that performing the FPTs will yield the documented acceptable results. The Contractor is subject to back-charging, as specified herein, if acceptable results are not demonstrated because of work that should have been verified during predemonstration testing prior to the submittal of the System Readiness Manual. Acceptable results must be obtained during a single demonstration. No more than two delays of less than 15 minutes each are acceptable for each test.
- a. In addition to conducting the functional tests developed by the CxA, the Contractor shall be required to complete all start-up and testing procedures as specified elsewhere in the Contract Documents.
 - b. Where the CxA requires BMS trending, the CxA will provide a points list within the FPT form that may include both hardware (input/output) and software (virtual) points and appropriate trending intervals.
11. The Contractor shall provide trend data to the CxA in electronic format. As a Owner approved alternative, the Contractor can provide the CxA remote access to the BMS and provide training that will allow the CxA to directly download trend data.
12. The CxA will analyze and review the trend data and associated system performance.

3.05 Cx AGENT Functional Performance Testing (FPT)

- A. Upon receipt of the Ready to Cx statement, the Cx Agent will coordinate a time with the Contractor to witness the FPTs.

- B. The CxA develops specific equipment and system functional performance test procedures. The Contractor and manufacturer review the procedures to make sure the tests are safe for the equipment provided.
- C. The functional test procedures are executed by the Contractors, under the direction of, and documented by the CxA.
- D. The CxA will direct a TAB verification, with support from the TAB Contractor, to verify the values reported in the final TAB report.
- E. Items of non-compliance in material, installation or setup are corrected at the Sub's expense and the system retested.
- F. All deficiencies noted will be tracked via the CxA issues log. The Contractor will be responsible for obtaining sign-off of corrected items.
 - 1. The Contractor is responsible for scheduling and coordinating commissioning activities. The Contractor shall reimburse the Owner for the cost of commissioning activities that must be repeated because of a lack of preparation or coordination by the Contractor. Reimbursable costs include CxA fees for services billed at the CxA's standard hourly rate. Activities subject to backcharging include: Repeated back-checking: Commissioning issues are documented in the Commissioning Issues Log. The Contractor shall submit a brief written statement describing when and how each issue has been resolved, which shall be added to the Issues Log maintained by the CxA. The CxA will back-check these issues on a one-time-per-issue basis to verify they have been resolved. If the back-checked issues that have not been resolved as reported, the associated cost of the unsuccessful back-check shall be subject to backcharging.
 - 2. Repeated installation verification: Once the Contractor has submitted the completed System Readiness Manual forms, the CxA will perform final installation verifications on selected systems. Discrepancies discovered will be reported in the Commissioning Issues Log. Back-checking the correction of these discrepancies shall be subject to back-charging.
 - 3. Repeated witnessing of FPT demonstrations: As specified in this section, the Contractor demonstrates the functional performance tests after they have verified that performing the FPTs will yield the documented acceptable results. The cost of witnessing demonstrations that do not demonstrate specified acceptance criteria shall be subject to back-charging.

3.06 SAMPLING

- A. As noted in the specifications, multiple identical pieces of non-life-safety or otherwise non-critical equipment will be functionally tested using a sampling strategy. Significant application differences and significant sequence of operation differences in otherwise identical equipment invalidates their common identity. A small size or capacity difference, alone, does not constitute a difference. It is noted that no sampling by Subs is allowed in pre-functional checklist execution.
- B. Sampling strategy referenced in the Specifications as the "xx% Sampling—yy% Failure Rule" is defined by the following example:
 - 1. xx = the percent of the group of identical equipment to be included in each sample.

2. yy = the percent of the sample that if failing, will require another sample to be tested.

C. The example below describes a 20% Sampling—10% Failure Rule.

1. Randomly test at least 20% (xx) of each group of identical equipment. In no case test less than three units in each group. This 20%, or three, constitute the “first sample.” If 10% (yy) of the units in the first sample fail the functional performance tests, test another 20% of the group (the second sample).
2. If 10% of the units in the second sample fail, test all remaining units in the whole group. If at any point, frequent failures are occurring, and testing is becoming more troubleshooting than verification, the CxA may stop the testing and require the responsible Sub to perform and document a checkout of the remaining units, prior to continuing with functionally testing the remaining units.

3.07 FAILURE DUE TO MANUFACTURER DEFECT:

A. If 10%, or three, whichever is greater, of identical pieces (size alone does not constitute a difference) of equipment fail to perform to the Contract Documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the Contractor, the Owner, the A/E, or the CxA. In such case, the Contractor shall provide the Owner with the following:

1. Within one week of notification Contractor or manufacturer's representative shall examine all other identical units making a record of the findings. The findings shall be provided to the Owner within two weeks of the original notice.
2. Within two weeks of the original notification, the Contractor or manufacturer shall provide a signed and dated, written explanation of the problem, cause of failures, etc. and all proposed solutions which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation. The Owner will determine whether a replacement of all identical units or a repair is acceptable.
3. Two examples of the proposed solution will be installed by the Contractor and the PM will be allowed to test the installations for up to one week, upon which the Owner will decide whether to accept the solution. Upon acceptance, the Contractor and/or manufacturer shall replace or repair all identical items, at their expense and extend the warranty accordingly, if the original equipment warranty had begun. The replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

3.08 DEFERRED TESTING

A. Unforeseen Deferred Tests: If any check or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of checklists and functional testing may be delayed upon approval of the Owner, A/E, and CxA. These tests will be conducted in the same manner as the seasonal tests as soon as possible.

- B. Seasonal Testing: During the warranty period, seasonal testing shall be completed as part of this contract. Seasonal testing is intended to test the performance of systems under full load conditions that cannot be simulated during the functional testing period. For example, it is impossible to test the heating system under full load conditions in July, so the heating system would be full load tested during the winter months. The CxA shall coordinate this activity. Tests will be executed, documented, and deficiencies corrected by the appropriate Subs, with facilities staff and the CxA witnessing. Any final adjustments to the O&M manuals and As-Builts due to the testing will be made by the Contractor.

3.09 TRAINING OF OWNER PERSONNEL

- A. The Contractor shall be responsible for training coordination and scheduling and ultimately for ensuring that training is complete. The CxA will be responsible for overseeing and approving the adequacy of the training of Owner personnel for commissioned equipment.
1. Instructor capabilities shall be commensurate with level of instruction required. Instructor qualifications shall be submitted to Owner and CxA for review prior to training.
 2. The specific training requirements of Owner personnel by Subs and vendors as directed within the specifications.
 3. Each Sub and vendor responsible for training shall submit a written training plan to the CxA for review and approval prior to training. The plan shall include the following elements:
 - a. Equipment (included in training)
 - b. Intended audience
 - c. Location of training
 - d. Objectives
 - e. Subjects covered (description, duration of discussion, special methods, etc.)
 - f. Duration of training on each subject
 - g. Instructor name and qualifications for each subject
 - h. Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
 4. The CxA develops criteria for determining that the training was satisfactorily completed, including attending some of the training, etc. The CxA recommends approval of the training to the Owner.

3.10 COMMISSIONING ISSUES LOG:

- A. Issues identified during the commissioning process, including during site observations, pre-functional testing verification and functional testing, will be logged in the commissioning issues log. The CxA will maintain the master log. For each issue, the CxA will make a recommendation regarding who they believe is in the best position to provide the resolution. However, it is the Contractor's responsibility to manage issue resolution, including the determination of how the issue will be resolved and who will do the work.
- B. Each issue on the list will be classified with a "status" of either "resolved", "unresolved", or "resolved-unverified". "Resolved" issues are closed, having either been addressed by the Contractor and verified as corrected by the CxA or having been accepted by the Owner. "Resolved-unverified" issues have been reported as resolved by the Contractor but are not yet verified by the CxA as resolved. "Unresolved" issues have not been reported as addressed by the Contractor. Updated unresolved issues lists will be distributed to team in MS Word/Excel format.
- C. Material and method issues discovered during commissioning, but that pertain to Contractor construction shall be promptly reported to the A/E, CxA and the Owner's Representative.
- D. When a commissioning issue is resolved, the Contractor shall submit an updated list with a written response describing when and how the issue is resolved. The CxA or an applicable member of the Design Team shall then back-check the resolution of said issue. The CxA scope of work includes one back-check of issues that the Contractor reports as resolved. Back-charging applies to back-checking required due to lack of preparation of Contractor.

3.11 OPERATION AND MAINTENANCE MANUALS:

- A. The specific content and format requirements for the standard O&M manuals are detailed in Section 017800 Closeout Submittals. Special requirements for TAB contractor in appropriate Division 23 Sections and for the Controls contractor are found in appropriate Division 23 Sections. Electrical requirements are located in the appropriate Division 26 Sections. Refer to the specifications for additional O&M requirements.
 - 1. System Narrative. The Contractor shall include in the beginning of the O&M manuals a separate section describing the systems including:
 - a. A system narrative describing the type and function of the system.
 - b. Site information, including facility description and current requirements.
 - c. Simplified professionally drawn single line system diagrams on 8 ½" x 11" or 11" x 17" sheets. These shall include chilled water distribution system, water system, condenser water system, heating system, supply air systems, and exhaust systems and others as designated. These shall show major pieces of equipment such as pumps, heat exchangers, humidifiers, control valves, expansion tanks, coils, service valves, etc.
- B. CxA Review and Approval. Prior to material completion, the CxA shall review the O&M manuals, documentation and redline As-Built for systems that were commissioned and list other systems documentation that the CxA should review to verify compliance with the Specifications. The CxA will communicate deficiencies in the manuals to the Owner or A/E, as requested. Upon a successful review of the corrections, the CxA recommends approval and acceptance of these sections of the O&M manuals to the Owner or A/E. The CxA also reviews each equipment warranty and verifies

that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

3.12 CLOSE-OUT PROCESS

- A. All start-up documentation generated by the subcontractors shall be submitted to the Cx agent and the Owner in an electronic format.
- B. The sign-in sheets for all training sessions shall be submitted to the Cx agent and the Owner in electronic format.
- C. All training activities will be scheduled at mutually agreeable times between the Contractor, the Owner, and the Cx agent.

END OF SECTION 01 91 00

General Conditions

Revised 2/13/2019

27.2 The Contractor will be held strictly to the intent of the Contract Documents in regard to the quality of materials, workmanship and execution of the Work. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The Engineer will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The Engineer shall promptly make decisions relative to interpretation of the Contract Documents.

28. LAND AND RIGHTS OF WAY

28.1 Prior to issuance of Notice to Proceed, the Owner shall obtain all land and rights of way necessary for carrying out and for the completion of the Work to be performed pursuant to the Contract Documents, unless otherwise mutually agreed.

28.2 The Owner shall provide to the Contractor information which delineates and describes the lands owned and rights of way acquired.

28.3 The Contractor shall provide at his own expense and without liability to the Owner any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY

29.1 The Contract shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion. The Contractor warrants and guarantees for a period of one (1) year from the date of Substantial Completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other Work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

30. TAXES

30.1 The Contractor will pay all sales, consumer, use and other similar taxes required by the law of the place where the Work is performed.

31. QUANTITIES OF ESTIMATE

31.1 Wherever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents including the Proposal, they are given for use in comparing bids, and the right is especially reserved, except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the OWNER to complete the Work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims, liability for damage, or adjustment to Contract item bid price.

32. VERIFICATION AND WARRANTY

32.1 The Contractor shall determine the nature and location of the WORK, the general and local conditions, and all other matters which can in any way affect the Work under this Contract. Failure to make an examination necessary for this determination shall not release the Contractor from the obligations of this Contract. The Contractor warrants that no oral agreement or conversation with any officer, agent, or employee of the Owner, or with the Engineer, either before or after the execution of this Contract, has affected or modified any of the terms or obligations herein contained.

33. DOCUMENTS TO BE KEPT ON THE JOB SITE

General Conditions

Revised 2/13/2019

- 33.1 The Contractor shall keep one copy of the Contract Documents on the job site, in good order, available to the Engineer, his representatives and representatives of all agencies having jurisdiction over the Work.
- 33.2 The Contractor shall maintain on the job site, and make available to the Engineer on request, one current fullsize marked-up set of the design drawings which accurately indicate all variations in the completed work that differ from the design information shown on the Plans. Said Plans shall show actual locations and elevations of all buried and concealed Work including piping, conduit, valves, stub outs and the like. Elevations shall be referenced to first floor finished elevation as datum. Locating dimensions shall be referenced to permanently fixed, accessible, and readily identifiable portions of building or site appurtenances by intersecting coordinate dimensions parallel to and at right angles to building lines.
- 33.3 Contractor shall provide and keep an up-to-date and complete record set of shop drawings. These prints shall be corrected daily and show every change from the approved shop drawings. This set of drawings shall be kept on the job site and shall be used only as a record set. This shall not be construed as authorization for the Contractor to make changes in the contract documents without written authorization. Contractor shall provide proof that the documents are being updated as noted above prior to issuing each payment request. Contractor's payment shall be contingent upon verification of documentation of as-built conditions.

34. ADDITIONAL CONTRACT DOCUMENTS

- 34.1 The Engineer will furnish to the Contractor, on request and free of charge, not more than 5 copies of the Contract Documents and 5 sets of full-size Plans. Additional copies of Contract Documents or Plans may be obtained on request by paying the actual cost of reproducing the Contract Documents or Plans.

35. NO PERSONAL LIABILITY OF PUBLIC OFFICIALS

- 35.1 In carrying out any of the provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

36. RECEPTION OF ENGINEER'S DIRECTIONS

- 36.1 The Superintendent, or other duly authorized representative of the Contractor, shall represent the Contractor in all matters given to him by the Engineer. Such directions of major importance will be confirmed in writing. Any directions will be so confirmed in each case on written request from the Contractor.

37. EMPLOYEES

- 37.1 The Contractor shall employ only competent subcontractors or skillful persons to do the work, and whenever any subcontractor or person shall appear to be incompetent or to act in a disorderly or improper manner, such person shall be removed from the Work and not again employed under this Contract. The Contractor shall not make any substitution for any subcontractor, person or entity previously selected unless the substitution is acceptable to the Owner.

38. REQUIREMENTS OF CALIFORNIA LAW FOR PUBLIC CONTRACTS

38.1 GENERAL

When the Contract Documents concern public works of the State or any county, municipality, or political subdivision created by its laws, the applicable statutes of the State of California shall apply including, but not limited to, the California Labor Code, Chapter I, Public Works. This contract shall also be subject to the provisions of the Labor Compliance Program (if applicable).

38.2 USE OF APPRENTICES ON PUBLIC WORKS PROJECTS

Attention is directed to the provisions in Sections 1777.5 (Chapter 1411, Statutes of 1968) and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him.

Section 1777.5, as amended, requires the Contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval.

The ratio of work performed by apprentices to journeymen who shall be employed in the craft or trade on the public work may be the ratio stipulated in the apprenticeship standards under which the joint apprenticeship committee operates, but, except as otherwise provided in Section 1777.5, in no case shall the ratio be less than one hour of apprentices work for every five hours of labor performed by a journeyman. However, the minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeymen.

The joint apprenticeship committee shall have the discretion to grant a certificate, subject to the approval of the Administrator of Apprenticeship, exempting a contractor from the 1-to-5 ratio set forth in this section when it finds that any one of the following conditions is met:

- (a) Unemployment for the previous three-month period in the area exceeds an average of fifteen percent (15%).
- (b) The number of apprentices in training in such area exceeds a ratio of 1 to 5.
- (c) There is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth (1/30) of its journeymen annually through apprenticeship training, either on a statewide bases, or on a local basis.
- (d) Assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman.

A contractor to whom the contract is awarded, or any subcontractor under him or her, who, in performing any of the work under the contract, employs journeyman or apprentices in any apprenticeable craft or trade and who is not contributing to a fund or funds to administer and conduct the apprenticeship program in any craft or trade in the area of the site of the public work, to which fund or funds other contractors in the area of the site of the public work are contributing, shall contribute to the fund or funds in each craft or trade in which he or she employs journeymen or apprentices on the public work in the same amount or upon the same basis and in the same manner as the other contractors do, but where the trust fund administrators are unable to accept the funds, contractors not signatory to the trust agreement shall pay a like amount to the California Apprenticeship Council. The contractor or subcontractor may add the amount of the contributions in computing his or her bid for the contract. The Division of Labor Standards Enforcement is authorized to enforce the payment of the contributions to the fund or funds as set forth in Section 227.

The responsibility of compliance with this section for all apprenticeable occupations is with the prime contractor.

The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

The provisions of Section 1777.5 shall not apply to contracts of general contractors or to contracts of specialty contractors not bidding for work through a general or prime contractor, when the contract involves less than thirty thousand dollars (\$30,000) or twenty (20) working days.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards at its branch office.

38.3 LABOR DISCRIMINATION
Add the following subsection:

38.3.1 Attention is directed to the following "Nondiscrimination Clause" that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NONDISCRIMINATION CLAUSE

1. During the performance of this contract, contractor and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
2. This Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS (GOV. CODE, SECTION 12990).

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of \$5,000, or more.

1. As used in the specifications:
 - a. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;
 - b. "Minority" includes:
 - (i) Black (all persons having primary origins in any of the black racial groups of Africa, but not of Hispanic origin);
 - (ii) Hispanic (all persons of primary culture or origin in Mexico, Puerto Rico, Cuba, Central or South America or other Spanish derived culture or origin regardless of race);
 - (iii) Asian / Pacific Islander (all persons having primary origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); and
 - (iv) American Indian / Alaskan Native (all persons having primary origins in any of the original peoples of North America and who maintain culture identification through tribal affiliation or community recognition).
2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall physically include in each subcontract of \$5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.
3. The contractor shall implement the specific nondiscrimination standards provided in paragraph 6(a) through (e) of these specifications.
4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Government Code, Section 12990, or the regulations promulgated pursuant thereto.
5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities.
Trainees
must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under Steps a. through e. below:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a

working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- b. Provide written notification within seven days to the director of DFEH when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - c. Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the Contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen, etc., are aware of the Contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.
 - e. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out.
7. Contractors are encouraged to participate in voluntary associations which assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's.
 8. The Contractor is required to provide equal employment opportunity for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) if a particular group is employed in a substantially disparate manner.
 9. Establishment and implementation of a bona fide affirmative action plan pursuant to Section 8104 (b) of this Chapter shall create a rebuttal presumption that a contractor is in compliance with the requirements of Section 12990 of the Government Code and its implementing regulations.
 10. The Contractor shall not use the nondiscrimination standards to discriminate against any person because of race, color, religion, sex, national origin, ancestry, physical handicap, medical condition, marital status or age over 40.
 11. The Contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code Section 12990.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Government Code Section 12990 and its implementing regulations by the awarding agency. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code Section 12990.
 13. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

NOTE: Authority cited: Sections 12935(a) and 12990(d), Government Code. References: Section 12990, Government Code.

38.4 HOURS OF LABOR

Eight hours' labor constitutes a legal day's work. The Contractor shall forfeit, as penalty to the Owner, \$25 for each worker employed in the execution of the Contract, by him or by any subcontractor under him, for each calendar day during which any worker is required or permitted to labor more than 8 hours in violation of the provisions of the Labor Code and, in particular, Section 1810 to Section 1817 thereof, inclusive.

38.5 PREVAILING WAGE

The Contractor shall, as a penalty to the Owner, forfeit not more than fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing rates for the work or craft in which the worker is employed for any public work done under the contract by him or her or by any subcontractor under him or her. The amount of forfeiture shall be determined by the Labor Commissioner and shall be based on consideration of the contractor's mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages, or the previous record of the contractor in meeting his or her prevailing wage obligations, or a contractor's willful failure to pay the correct rates of prevailing wages. A mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages is not excusable if the contractor has knowledge of his or her obligations under this part. The difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the contractor.

The contractor shall pay each worker not less than prevailing wages on all public works projects, including maintenance work, exceeding \$1,000 in cost, in accordance with Section 1771 of the Labor Code. The contractor shall also pay travel and subsistence payments to all workers needed to execute the contract, in accordance with Section 1773.8 of the Labor Code.

The Owner will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wages set forth in the Contract Documents. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his Proposal, and will not under any circumstances be considered as a basis of a claim against the Owner on the Contract.

39. SAFETY

- 39.1 The Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during performance of the Work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U. S. Department of Labor (OSHA), the California Occupational Safety and Health Act, and all other applicable Federal, State, County, and local laws, ordinances, codes, the requirements set forth below, and any regulations that may be detailed in other parts of these Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.
- 39.2 The Contractor shall appoint for the duration of this Contract, a qualified supervisory employee to develop and/or supervise a Contractor's job safety program that will effectively implement the safety provisions of the above agencies.
- 39.3 The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's safety supervisor, the safety program, or any safety measures taken in, on, or near the construction site.
- 39.4 The Contractor, as a part of his safety program, shall maintain at his office or other well-known place at the job site, safety equipment applicable to the Work as prescribed by the aforementioned authorities, all articles necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons (including employees) who may be injured on the job site.
- 39.5 If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Owner. In addition, the Contractor must promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the Work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- 39.6 If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.
- 39.7 When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, if the asbestos or hazardous substance has not been rendered harmless, the

Contractor may continue work in unaffected areas reasonably believed to be safe, and shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In accordance with Section 25914.1 of the Health and Safety Code, all such removal of asbestos or hazardous substances including any exploratory work to identify and determine the extent of such asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for such delay as provided in Section 8-1.09, "Right of Way Delays", of the Standard Specifications.

40. BEGINNING OF THE WORK

40.1 Before Work shall be started and materials ordered, the Contractor shall meet and consult with the Owner and/or Engineer relative to materials, equipment, right-of-way, schedules and all arrangements for prosecuting the Work.

41. SCHEDULES AND PROGRESS REPORTS

41.1 Prior to submittal of first partial payment request, the Contractor shall furnish the Engineer for his review, a schedule or schedules of expected progress of the Work under the Contract, showing approximately the dates on which each part or division of the Work is expected to be started and finished. The progress schedules shall be submitted regularly and shall cover a time period satisfactory to the Engineer. The Contractor shall also forward to the Engineer, with the request for progress payment each month, a summary report of the progress of the various parts of the Work under the Contract in the shops and in the field, stating the existing status, rate of progress, estimated time of completion, and cause of delay, if any. If the work is behind the submitted schedule, the Contractor shall submit in writing a plan acceptable to the Owner and Engineer for bringing the work up to schedule.

42. CLAIMS

42.1 In any case where the Contractor deems additional compensation is due him for Work or materials not clearly covered in the Contract or by a Change Order, the Contractor shall provide written notice to the Engineer of such case at least 48 hours before he intends to begin the Work in question. If such notification is not given, then the Contractor hereby agrees to waive the claim for such extra compensation.

If the Engineer concurs that additional compensation is due the Contractor, a change will be issued as provided in Section 14.1. If not, the Contractor shall keep a record of the cost of the work in question, in accordance with the provisions of Section 14.1(c). Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. Claims for additional compensation shall be made in itemized detail and submitted, in writing, to the Owner and Engineer within 10 days following completion of that portion of the work for which the Contractor bases his claim. In case the claim is found to be just, it shall be allowed and paid for under a Change Order subsequently issued for the purpose.

42.2 Claims shall be litigated in a court of competent jurisdiction.

42.3 The Director of Public Works will make the final determination of any claims which remain in dispute after completion of claim review by the Engineer's authorized representative. A Claim Review Board, appointed by the Director of Public Works, will review such claims and make a written recommendation. The Contractor may meet with the Claims Review Board to make a presentation in support of such claims with the Engineer's authorized representative present.

43. CLEANING UP

43.1 The Contractor shall at all time, at his own expense, keep property on which work is in progress and the adjacent property free from accumulations of waste material or rubbish caused by employees or by the work and shall maintain material stockpiles in a neat, safe and orderly manner. Upon completion of the construction, the Contractor shall, at his own expense, remove all temporary structures, rubbish, and waste materials resulting from his operation. In the event that the Contractor does not properly clean up promptly, the Owner may separately contract to do so and withhold the cost from the Contractor.

44. NO WAIVER OF RIGHTS

44.1 Neither the inspection by the Owner, through the Engineer or any of his employees, nor any order by the OWNER for payment of money, nor any payment for, or acceptance of, the whole or any part of the Work by the Owner or Engineer, nor any extension of time, nor any possession taken by the Owner or its employees, shall operate as a waiver of any provision of this Contract, or any power herein reserved to the Owner, or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

45. ACCESS BY STATE AND LOCAL GOVERNMENT OFFICIALS

45.1 During construction, Contractor shall supervise, inspect and direct work competently and efficiently, devoting such attention thereto and applying such personal skills and expertise as may be required and necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.

45.2 Owner shall at their option, provide an Inspector and assistant Inspectors, if necessary, who shall act under the direction of the Engineer and the Owner as prescribed by law. Contractor in no way is relieved of any responsibility by the activities of Inspector.

45.3 Work shall be performed under the general observation and administration of Engineer. Contractor shall immediately comply with orders and instructions given in accordance with terms of Contract by Engineer, or by any authorized assistant, inspector or other representative of Engineer acting within scope of duties entrusted, but nothing herein contained shall be taken to relieve Contractor of obligations or liabilities under Contract.

45.3.1 Engineer will provide administration of Contract and observation of the Work as hereinafter described.

45.3.2 Engineer will have authority to act on behalf of Owner only to extent provided in Contract Documents.

45.3.3 Engineer will visit site at intervals as agreed in the Owner / Engineer agreement. However, Engineer will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of Work. On basis of on-site observations, Engineer will keep Owner informed of progress of Work, and will endeavor to guard Owner against defects and deficiencies in Work of Contractor.

45.3.4 Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work.

45.3.5 Engineer will not be responsible for or have control or change over acts or omissions of Contractor, subcontractors, or any of their agents or employees, or any other persons performing Work.

45.3.6 Engineer will review Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with design concept of Work and with information given in Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay.

45.3.7 Engineer will conduct inspections to recommend dates of Substantial Completions and Final Acceptance, will receive and forward to Owner for their review, written warranties and related documents required by Contract and assembled by Contractor.

45.3.8 Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings and Specifications or otherwise) as Engineer may determine necessary, which shall be consistent with the intent of and reasonable inferable from the Contract Documents. Such written clarifications and interpretations will be binding on the Contractor, unless Owner in its discretion directs otherwise. If Contractor believes that a written clarification or interpretation justifies an adjustment in the Contract Sum or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, the Contractor may make a written claim therefore as provided herein.

45.3.9 Based on the observations, Engineer may disapprove or reject Work which Engineer believes to be defective, or that Engineer believes will not produce a complete Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer with consent of Owner, will also have authority to require special inspection or testing of Work, whether or not the work is fabricated, installed or completed.

46. FIRE PREVENTION AND PROTECTION

46.1 The Contractor shall perform all Work in a fire-safe manner. He shall supply and maintain, on the site, adequate fire fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable Federal, local and State fire prevention regulations and where the regulations do not cover, with applicable parts of the National Fire Prevention Standard for "Safeguarding Building Construction Operations", (NFPA No. 241).

47. STORAGE AND PROTECTION OF MATERIALS

47.1 Materials shall be so stored as to ensure the preservation of their quality and fitness for the Work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and they shall be placed under cover. Stored materials shall be located so as to facilitate prompt

inspection. Private property shall not be used for storage purposes without the written permission of the Owner or lessee.

- 47.2 Electrical equipment, devices, and motors shall be placed in dry and warm storage as approved by the Engineer.
- 47.3 All equipment and materials which are not to be painted (such as aluminum and stainless steel) and all factory finished or coated equipment and materials which are not to be painted, that are installed prior to completion of adjacent work, shall be completely covered and protected.

48. FINAL INSPECTION

- 48.1 Upon completion of all the Work under this Contract, and before the request for final payment is made, Contractor shall notify the Engineer in writing, and request a Final Inspection of the Work. This request shall include Contractor's certification that the Contract Documents have been reviewed, that the Project has been inspected for compliance and completed in accordance with the Contract Documents, that Work has been tested and is operational and the Project is completed, and ready for final inspection. The Contractor shall provide to the Engineer copies of Contractor's pre-final Inspection list of items that the Contractor completed prior to requesting the Final Inspection.

When the Work is deemed acceptable under the Contract Documents and the Contract fully performed, the Engineer will promptly record a Notice of Completion. Thirty-Five (35) days after the filing of said Notice of Completion the Engineer shall issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The final Certificate for Payment signed by the Engineer will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment have been fulfilled.

- 48.2 Upon completion of Final Inspection, the Engineer shall transmit in writing to the Contractor a list of items to be completed or corrected before the request for Final payment is made. This list shall be prepared by the Managing Engineer and may be in addition to any list previously prepared or cover any previous work reviewed by the Resident Engineer or Inspectors.
- 48.3 Warranties required by the Contract Documents shall commence on the date of recording of the Notice of Completion in the event that a Certificate of Substantial Completion has not been issued.

49. POSTING OF WAGE RATES

- 49.1 Attention is directed to Section 1735 of the Labor Code of the State of California. No discrimination shall be made in the employment of persons upon public works because of race, color, religion, ancestry, sex, or national origin. Every Contractor and Subcontractor for public works violating this Section is subject to all penalties imposed thereof.
- 49.2 APPRENTICES:
- 49.2.1 The Contractor and all subcontractors shall comply with the provision of Section 1777.5 of the California Labor Code regarding employment of apprentices and contributions of apprenticeship program.
- 49.3 WAGE RATES:
- 49.3.1 Pursuant to the provisions of Articles 1 and 2 of Chapter 1, Part 7, Division 2 of the Labor Code of the State of California, not less than the general prevailing rate of per diem wages for holiday and overtime work for each craft classification or type of worker needed to execute the Work contemplated under this Contract, as ascertained by the Owner, shall be paid by the Contractor and all subcontractors doing or contracting to do any part of said Work. Copies of said schedule of wage rates are available to any interested party on request.

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The Contractor shall post a copy of the prevailing wage rates of per diem wages at the job site as determined by the County of Lake in a prominent place where it can be easily seen by the workers.

- 49.3.2 Employer payments other than those itemized in said schedule of wage rates, as defined in Section 1773.1 of the Labor Code, shall be paid in accordance with the terms of the collective bargaining agreement applicable to the type or classification of the worker or mechanic employed on the Work.
- 49.3.3 All wages paid, including payment for travel and subsistence payments to workers, shall comply with requirements of Section 1773.8 of the Labor Code.
- 49.3.4 Pursuant to Section 1777.5 of the Labor Code, each apprentice shall be paid in accordance with the terms of the collective bargaining agreement applicable to the trade or craft at which he is employed.
- 49.3.5 The Contractor shall forfeit as a penalty to the Owner the sum of twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing rate for such work or craft in which such worker is employed for any work done under the Contract by him or by any subcontractor under him. In addition, the difference between the stipulated prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor. The Contractor and each subcontractor shall keep an accurate record showing the name, occupation, and actual per diem wages paid to each worker employed on the Work contemplated by this Agreement, which record shall be kept open at all reasonable hours to the inspection of the Owner, and to the Division of Labor Law Enforcement. Said Owner shall have, at his election, all the remedies provided by Section 1775 of the Labor Code for the recovery of said penalty.
- 49.3.6 Claims and disputes pertaining to labor classifications shall be decided by the Owner unless local law provides otherwise. The Contractor shall diligently proceed with the Work pending settlement of any dispute which otherwise might delay completion.
- 49.3.7 The wages set forth are the minimum that may be paid by the Contractor. Nothing contained in the Contract Documents shall be construed as preventing the Contractor from paying more than the minimum rate.

50. OVERTIME WORK

- 50.1 Overtime and shift work may be established as a regular procedure by the Contractor and with the written permission of the Engineer. Such permission may be revoked at any time. No work other than overtime and shift work established as a regular procedure shall be done between the hours of 6:00 p.m. and 7:00 a.m., nor on Saturdays, Sundays or legal holidays, except such work as is necessary for the proper care and protection of the work already performed or except in case of an emergency.
- 50.2 All costs for overtime inspection, including those occurring as a result of overtime and shift work established as a regular procedure, shall be paid for by the Contractor. Overtime inspection shall include inspection required during holidays, Saturdays, Sundays, and any weekday between the hours of 6:00 p.m. and 7:00 a.m. Such costs will include, but will not necessarily be limited to, engineering, inspection, general supervision and other expenses which are directly chargeable to the overtime work. All such charges shall be deducted by the Owner from payments due the Contractor.

* * * END OF GENERAL CONDITIONS * * *

SUPPLEMENTARY GENERAL CONDITIONS

These supplementary general conditions add to, amplify, clarify, and in some cases revise the “General Conditions” as found in these Specifications. In the event of a discrepancy, these Supplementary General Conditions shall govern over the General Conditions.

The section numbers of these Supplementary General Conditions correspond to the section numbers of the General Conditions. The General Conditions are hereby revised by adding or amending the following sections:

SECTION 15: TIME FOR COMPLETION AND LIQUIDATED DAMAGES

Replace the following subsections:

15.5 Since Time is of the essence, the Contractor is anticipated to receive the Notice to Proceed (NTP) from the Owner between December 10, 2024 and December 17, 2024 and will be allowed to commence work under this contract immediately following the NTP and fully complete the work no later than April 17, 2026.

Add the following subsections:

15.5.1 The Contractor shall pay to the Owner for each and every day, including Saturdays, Sundays and legal holidays, that he shall be in default in completing the whole work to be done under contract time, the sum of one thousand (\$1,000.00) per day, which sums are by the execution of the Agreement mutually agreed upon as liquidated damages which the Owner will suffer by reason of such default. The owner shall have the right to deduct the amount of such damages from any monies due or to become due the Contractor under this Contract.

SECTION 38.2: USE OF APPRENTICES ON PUBLIC WORKS PROJECTS

Add the following provisions to the end of Section 38.2:

“A contractor’s use of Lake County residents as apprentices on a County public works’ project in accordance with Section 1777.5 of the California Labor Code may be included in the calculation to determine eligibility for a local work force discount but may not exceed the ratios provided in Section 1777.5.

On projects in excess of \$125,000, prior to commencement of work, the prime contractor shall submit a plan acceptable to the Owner which outlines how the apprenticeship requirements will be met by all contractors working on the project.

At any time during the term of the contract and for a period of 30 days thereafter, the prime contractor shall, within 5 days of request by the Owner, provide evidence of compliance with Section 1777.5.

SECTION 51: OCCUPANCY PRIOR TO COMPLETION

Add Section 51, “Occupancy prior to completion”, as follows:

51.1 The Owner reserves the right to occupy, on written notice, any portion of the work at any time before completion while work is in progress. In the event of such occupancy, the Contractor

shall provide, without additional cost to the Owner, suitable protection by means of fencing barriers, posted signs or other method as required to prevent persons

SUPPLEMENTARY GENERAL CONDITIONS

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other than those directly connected with the work from entering remaining areas where continuing work is being conducted, vehicles are operating, or materials are stored.

51.11.1.1 The County's right to sequence Work in manner which would avoid disruption to the County's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities require by this Contract; the County's or any Inspector's enforcement of government act or regulation, or the provisions of the Contract Documents.

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Work by Owner.
4. Future work.
5. Owner-furnished products.
6. Access to site.
7. Coordination with occupants.
8. Work restrictions.
9. Specification and Drawing conventions.
10. Miscellaneous provisions.

1.3 PROJECT INFORMATION

- A. Project Identification: Lake County Sheriff's Administration Facility, Bid No. 250816.

1. Project Location: 1431 Hoyt Avenue, Lakeport, CA 95453 B.

Owner: County of Lake, Public Services Department.

1. Owner's Representative: Lars Ewing, Public Services Director, 333 Second Street, Lakeport CA 95453 (707) 262-1618.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:

1. The Project includes renovation of existing 1-story building originally constructed in 1994. Demolition scope of work includes removal of existing partition, finishes, root top mechanical equipment, electrical equipment. Plumbing fixtures and portion of existing parking stalls. Proposed scope of work includes adding a new second floor within existing structure, new building addition for elevator and supporting equipment room, seismic

upgrade, fully automatic fire sprinkler system, new roof top mechanical equipment, new accessible public parking stalls, and secured parking lot. Approximately 20,323 SF on existing ground floor will include offices, breakroom briefing room, weapons room, interview rooms, evidence room with support spaces, storage, restrooms, locker rooms, and corridors. A new second floor with 3,496 SF of space will provide future office expansion and circulation area. B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

- A. Owner will contract for Testing & Inspections, Commissioning Agent, Geotechnical Engineer Observation & Inspections, IT/Telecom Equipment Installation before, during, and after project activities. Work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.6 CONTRACTOR-FURNISHED PRODUCTS

- A. Contractor shall furnish products indicated. The Work includes unloading, handling, storing, and protecting Contractor-furnished products as directed and turning them over to Owner at Project closeout.

1.7 WORK SEQUENCE

- A. The Contractor shall Coordinate the construction schedule and operations with Project Coordinator and Engineer.

1.8 ACCESS TO SITE

- A. General: Contractor shall have use of Project site for construction operations as indicated on Drawings and as indicated by requirements of this Section.
- B. Use of Site: Work will be conducted between 7:00 AM through 4:30 PM Monday through Friday except Holidays. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.9 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and adjacent buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate

Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

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1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.10 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public roads and highways and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: All work must be performed between 7:00 AM through 4:30 PM Monday through Friday except Holidays, unless otherwise agreed.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify County not less than ten days in advance of proposed utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 1. Notify County not less than two days in advance of proposed disruptive operations.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- B. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard.

1.12 PROJECT SCHEDULE

- A. The Owner will issue a "Notice of Award" letter to the Contractor after the Owner's regular Board meeting. The contract, certificate of insurance, and performance and payment bonds shall be returned/submitted no later than 10 days after receiving the contract for

signature.

- B. Within 10 days after receipt of the contract, certificate of insurance, and performance and payment bonds, the County will issue a Notice To Proceed.
- C. Work may begin on or after the date specified in the Notice To Proceed.

1.13 REGULATORY REQUIREMENTS

- A. Owner has contacted governing authorities and reviewed design requirements of local, state and federal agencies for applicability to Project and secured the following permits and agreements, or confirmation of no jurisdiction, which are included herein as exhibits or will be issued as Bid Addendums when completed:
 - 1. County of Lake, Sewer/Water Department (fees paid)
 - 2. County of Lake, Environmental Health Department (Permit-pending)
 - 3. Lakeport Fire District (Permit-pending)
 - 4. Lakeport School District (fees paid)
 - 5. County of Lake, Public Works Department (fees paid)
 - 6. Lake County Air Quality Management (Permit-pending)
 - 7. County of Lake, Community Development Department (Grading Permit-pending)
 - 8. County of Lake, Building Department (Permit-pending)

1.14 MISCELLANEOUS PROVISIONS

- A. WORKMANSHIP. All work shall be performed in a neat and professional manner using the best recognized practices of the particular trade involved and shall be accomplished by mechanics and workers skilled and trained to properly complete the work required. The work shall proceed vigorously to completion once it is started. Time is of the essence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

SECTION 01 14 00

WORK RESTRICTIONS

SUMMARY
01 10 00 - 5/4

PART I - GENERAL

1.01 WORK HOURS

- A. No Work shall be done outside of standard Monday through Friday 7:00 a.m. to 4:30 p.m. working hours, on holidays or weekends unless prior written approval has been retained from the University's Representative.

1.02 PROJECT PHASING (NOT USED)

1.03 WORK SEQUENCE and WORK RESTRICTIONS (NOT USED)

1.04 CONTRACTOR'S USE OF PROJECT SITE

- A. CONTRACTOR's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings.

1.05 OWNER OCCUPANCY (NOT USED)

1.06 SUBSTANTIAL COMPLETION

- A. Substantial Completion shall be applicable to the entire Work.

1.07 PROTECTION OF PERSONNEL

- A. County of Lake personnel and public visitors will be occupying parts of the adjacent buildings during the construction period. CONTRACTOR shall take proper precautions to ensure the safety of all persons during the construction period.

1.08 WORK SITE DECORUM

- A. Extreme care to limit noise shall be taken at all times that the building is occupied. Loud or unnecessary conversation shall be avoided. The playing of radios, or any audio devices shall be strictly prohibited. Noise, that in the sole opinion of the Owner's Representative, is disturbing or disruptive to occupants of the building and adjacent properties shall be scheduled for periods when the building is not occupied.
- B. CONTRACTOR shall control the conduct of its employees so as to prevent unwanted interaction initiated by CONTRACTOR's employees with County of Lake staff, or other individuals, adjacent to the Project site. Without limitation, unwanted interaction by CONTRACTOR's employees includes whistling at or initiating conversations with passersby. In the event that any CONTRACTOR's employee initiates such unwanted interaction, or utilizes profanity, CONTRACTOR shall, either upon request of Owner's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the Owner.

- C. SMOKE AND TOBACCO-FREE ENVIRONMENT: The Owner is committed to a healthy workplace culture and environment. The project site is a Smoke and Tobacco-Free environment.

Smoking and the use of smokeless tobacco products (e.g., e-cigarettes and other unregulated nicotine products) is strictly prohibited. This policy is intended to provide a healthier, safer, and productive work environment.

- D. Alcoholic beverages are prohibited on the Owner's Project site.

1.09 INTERRUPTION OF BUILDING SERVICES

- A. Planned utility service shutdowns shall be accomplished during periods of minimum usage. In some cases, this will require Work activities before 8:00 a.m. and after 5:00 p.m. and weekend Work, at no additional cost to the Owner. At least 14 calendar days advance notice shall be given to the Owner's Representative before interruptions to utility service (refer to Utility Service Interruption/Shut Down Request) and other interferences with use of existing buildings, surrounding hardscape and roads.
- B. Shutdowns critical to the completion of the project shall be listed as Milestones on the project schedule. The CONTRACTOR shall program Work so that service will be restored in the minimum possible time and shall cooperate with the Owner in reducing shutdowns of utility systems.
- C. The Owner reserves the right to deny shutdown requests based on scheduled workload, research projects, and usage of surrounding buildings or other activities planned on campus.
- D. Owner's costs for initial planned utility service shutdowns shall be borne by the Owner. If repeat utility service shutdowns are required due to work necessary to correct CONTRACTOR's defective work, mistakes in new work layout such as misalignment or installation conflicts with other new work, Owner's costs for repeat shutdown(s) will be deducted from Contract Sum.

1.10 SITE INGRESS AND EGRESS

- A. Access to Project site shall be as indicated on the Drawings. Access to Project site is limited to designated routing on existing access roads. The CONTRACTOR and their employees, subcontractors, suppliers or delivery personnel must stay on the designated roads and may not drive, ride or walk to other locations unless prior permission is provided in writing by the Owner's Representative.
- B. CONTRACTOR shall take all necessary precaution to ensure the safety of the bicyclists and pedestrians that use the campus roads.

- C. CONTRACTOR shall clean the site access and roads affected by the Work and shall maintain such in a dust free and safe and usable condition for motorists, bicyclists and pedestrians. During inclement weather CONTRACTOR shall closely monitor conditions to prevent slickness of roads.
- D. CONTRACTOR shall be permitted to block only 1/2 of a street at a time for momentary site access, unless specified otherwise. The street shall be operational and usable by the Owner at all times.

1.11 MOTOR VEHICLE AND BICYCLE TRAFFIC CONTROL

- A. CONTRACTOR shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. The CONTRACTOR shall provide a schedule of any activity that will impact traffic, or any planned lane or street closure, for approval by the Owner's Representative and shall give a minimum of 14 business days notice before closing any street or access.
- B. CONTRACTOR shall furnish at CONTRACTOR's expense all signage barricades, lights, and flaggers required to control traffic and shall provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for the protection of the public; and maintain, from the beginning of twilight through the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and Work.
- C. CONTRACTOR shall provide directional signs for use throughout the duration of the Project. The quantity shall be determined by the Owner's Representative and CONTRACTOR during a mandatory Pre-construction site meeting. CONTRACTOR shall prepare a mock-up of the sign for approval by the Owner's Representative.
- D. It is the responsibility of the CONTRACTOR performing Work on, or adjacent to, a roadway or highway to install and maintain such devices which are necessary to provide reasonably safe passage for the traveling public, including pedestrians and bicyclists, through the Work, as well as for the safeguard of workers. Before Work begins, a site meeting shall be held to discuss motor vehicle and bicycle traffic control plans for handling traffic through a construction or maintenance zone. Traffic control plans shall be submitted for review by the Owner's Representative and public agency or authority having jurisdiction over the roadway or highway. These traffic control plans shall be prepared by persons knowledgeable about the fundamental principals of temporary traffic controls and the work activities to be performed. The design, selection, and placement of traffic control devices for the traffic control plan shall be based on engineering judgment and in accordance with Part 6 of the California Manual on Uniform Traffic Control Devices for Streets and Highways.

- E. All metal plating and metal bridging shall be non-skid with waffle-patterns or right-angle undulations or shall be coated with a non-skid product. Plating shall be installed with no protruding edges or corners sticking up and with no bouncing or shifting.

PART II - PRODUCTS – Not applicable to this Section.

PART III - EXECUTION – Not applicable to this Section.

END OF SECTION 01 14 00

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SECTION 01 22 00 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The bid items will be paid by Lump Sum Prices. They constitute all of the labor and costs for the completion of the work.
 - 1. No direct or separate payment will be made for providing miscellaneous temporary or accessory works and services, including but not limited to OWNER's and CONTRACTOR's field offices and sheds, surveys, job signs, sanitary requirements, testing, safety devices, submittals, record drawings, water supplies, dust controls, power, maintaining traffic, removal of CONTRACTOR generated waste, watchmen, security, bonds, insurance, cleanup, and all other conditions of the Contract Documents.
- B. All CONTRACTOR Health and Safety provisions to perform the work will be included in related bid items.
- C. Contractor quality control, record drawings, project meetings, and associated testing provisions during the progression of the work will be included in the related bid items.

1.2 RELATED DOCUMENTS

- A. Drawings and Technical Specification.

1.3 SUMMARY

- A. This Section specifies administrative and procedural requirements for lump sum, unit price, and contingency pay items.
 - 1. Bid prices shall be based on Lump Sums and include all necessary material, overhead, profit, and applicable taxes and permit fees.
 - 2. Refer to individual Technical Specifications sections for construction activities requiring the establishment of bid prices, as applicable.
 - 3. OWNER reserves the right to reject the CONTRACTOR's work-in-place until the work meets the requirements of the Drawings and Specifications.

PAYMENT PROCEDURES

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SECTION 01 23 00

ALTERNATES

PART I - GENERAL

1.01 GENERAL

- A. This Section identifies each Alternate and describes basic changes to the Work only when that Alternative is made a part of the Work by specific provision in the Agreement.
- B. Lump Sum Base Bid and Alternates shall include costs of all supporting elements required, so that combination of Lump Sum Base Bid and any Alternates shall be complete. Scope of Work for all Alternates shall be in accordance with applicable Drawings and Specifications.
- C. Except as otherwise specifically provided by University, Work described in Alternates shall be completed with no increase in Contract Time.
- D. This Section includes only non-technical descriptions of the Alternates. Refer to Sections of Division 2 - 48 of the Specifications for technical descriptions of the Alternates.
- E. Coordinate related Work and modify surrounding Work as required to integrate Alternates into the Work properly and completely.

1.02 DESCRIPTION OF ALTERNATES

- A. ADD ALTERNATE #1: Elevator Maintenance Service Contract – 12 Months
- B. ADD ALTERNATE #2: Elevator Maintenance Service Contract – 60 Months
- C. ADD ALTERNATE #3: Solar / PV Parking Canopies (pending Bid Addendum – Appendice I)

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not applicable to this Section

END OF SECTION 01 23 00

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ALTERNATES

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SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - A. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - A. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - B. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copy of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- A. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.

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- b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate
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c

Contractors that will be necessary to accommodate proposed substitution.

- c. Provide a detailed side-by-side comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes, such as performance, size, weight, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviation, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects with project names and addresses and names and addresses of engineers and owners.
- h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
- j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

- B. Owner's Action: If necessary, Owner will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Owner will notify Contractor through Project Coordinator of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Forms of Acceptance: Change Order, Construction Change Directive, or Owner's Supplemental Instructions for minor changes in the Work.

SUBSTITUTION PROCEDURES

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- b. Use product specified if Owner does not issue a decision on use of a proposed substitution within time allocated.

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1.5 Q
QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.
- B. Request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - 2. Will provide the same warranty for substitution as for specified product.
 - 3. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
 - 4. Waives claims for additional costs which may subsequently become apparent.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Owner or Engineer will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution provides sustainable design characteristics that specified product provided.
 - c. Substitution request is fully documented and properly submitted.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.

SUBSTITUTION PROCEDURES

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- f. Requested substitution is compatible with other portions of the Work.
- g. Requested substitution has been coordinated with other portions of the Work.
- h. Requested substitution provides specified warranty.

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- i. I
f requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed unless agreed upon by Owner and Engineer.

C. Substitutions for Convenience: Owner will consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Owner.

- 1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
- b. Requested substitution does not require extensive revisions to the Contract Documents.
- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is fully documented and properly submitted.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

SUBSTITUTION PROCEDURES

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END OF SECTION

SECTION 01 25 50

CLARIFICATION/INFORMATION PROCEDURES

PART I - GENERAL

1.01 DESCRIPTION

- A. This Section contains the procedures to be followed by Contractor for submitting a Request for Information (RFI) upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or Drawings or upon having any question concerning interpretation.
- B. Section Includes
 - 1. RFI Administrative requirements
 - 2. RFI Procedures
 - 3. RFI Execution

1.02 RELATED DOCUMENT SECTIONS

- A. Conditions of the Contract: Governing requirements for changes in the Work, in Contract Sum and Contract Time.
- B. Section 016100 – PRODUCT REQUIREMENTS: Product options, substitutions, omissions, and improper descriptions.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Description: Section provides procedure for Contractors to obtain interpretation or clarification of the Contract Documents, or identify apparent conflicts, omissions, or errors in the Contract Documents.
- B. Responsible Person for Contractor: Submit name of the individual authorized to receive Requests for Information documents, and who is responsible for forwarding Request.
- C. RFI Format: Submit all Requests for Information on the form attached at the back of this Section, or electronic and/or web-based construction administration software provided or accepted by the Owner.

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1.04 RFI PROCEDURES

A. RFI Format, Numbering and Subject:

1. RFI Format: Submit all requests for clarification or additional information in writing to Owner's Representative using the RFI Request for Information form provided at the back of this Section or obtained from Owner's Representative.
2. RFI Numbering: Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix for resubmissions. For example, the first RFI is numbered "001". The second RFI is numbered "002" and so on. The first resubmittal of RFI "002" will be numbered "002a".
3. RFI Subject: Limit each RFI to one (1) subject only. B. RFI Submittal conditions:
 1. Discovery of unforeseen condition or circumstance not described in the Contract Documents.
 2. Discovery of an apparent conflict, discrepancy, or inconsistency in or between portions of the Contract Documents.
 3. Discovery of a situation, direction or apparent omission that cannot be reasonably inferred from the intent of the Contract Documents.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 EXECUTION OF RFI's

- A. Email the Owner's Representative the RFIs. Emailed RFI requests received after normal business hours and/or received on non-normal workdays, as defined in Specification

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

Section 013100—COORDINATION, Item 1.07.F.4.A will begin notification time starting at 7:00 a.m. the following workday.

- B. Failure to provide proper information: RFIs will not be recognized or accepted if, in the opinion of Owner's Representative, one of the following conditions exist:
 - 1. Contractor submits the RFI as a request for substitution.
 - 2. Contractor submits the RFI as a Submittal.
 - 3. Contractor submits the RFI as a Contract Document discrepancy or omission without through review of the Documents (Capricious submission).
 - 4. Contractor submits the RFI assuming portions of the Contract Documents are excluded or by taking an isolated portion of the Contract Document in part rather than in whole.
 - 5. Contractor submits the RFI in an untimely manner without proper coordination and scheduling of Work of other Trades.
 - C. Response Time: Request clarifications or information immediately upon discovery of need. Submit RFI's in a timely manner allowing full response time to avoid impacting Contract Schedule.
 - 1. Owner's Representative, whose decision will be final, shall resolve issues and respond to questions of Contractor , in most cases, within fourteen (14) calendar days. Actual time may be lengthened for complex issues, or shortened for expedited situations, as mutually agreed in writing.
 - 2. After submission of an RFI by Contractor and prior to receipt of the RFI response from Owner, the Contractor proceeds with effected Work at own risk. Any portion of the Work not constructed in accordance with Owner interpretation, clarification, instruction or decision is subject to removal and replacement at Contractor expense.
 - D. Failure to Agree: In the event of failure to agree to the scope of the Contract requirements, Contractor shall follow procedures set forth in Article 4 of the General Conditions of the Contract.
- 3.02 Refer to the following Attachment
- A. Request for Information

END OF SECTION 01 25 00

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

REQUEST FOR INFORMATION

Project #: _____ Project Title: _____
RFI #: _____ Date: _____ HCAI #: _____

County of Lake Public Services 333 2 nd Street, Lakeport, CA 95453 Attn.: <u>Capital Project Manager</u> P: 707-262-1618 C: 707-245-6911 Email: Joseph.Cooper@lakecountyca.gov	From:	

SUBJECT: _____

SPEC SECTION/DRAWING #: _____ PARA: _____ DETAIL: _____
RM # _____ GRID # _____

TRANSMITTAL RECORD	Requestor to County PS	County PS to A/E	A/E to County PS	County PS to Requestor	Notes
Date Submitted					

INFORMATION NEEDED: _____

CONTRACTOR'S PROPOSED RESOLUTION: _____

REQUESTOR SIGNATURE: _____ REPLY REQUIRED BY: _____

☐ ATTACHMENTS: _____

REPLY:

REPONDER SIGNATURE: _____ DATE: _____

UNLESS OTHERWISE INDICATED ABOVE, THE REPLY TO THIS RFI IS NOT INTENDED TO BE A CHANGE DIRECTIVE. SHOULD THE CONTRACTOR, SUBCONTRACTOR, OR SUPPLIERS FEEL THAT THE REPLY WILL IMPACT THE PROJECT COST OR SCHEDULE; IT SHOULD IMMEDIATELY BE CONVEYED TO THE OWNER'S PROJECT MANAGER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

COPIES: ☐ COUNTY ☐ CONSULTANTS ☐ _____ ☐ _____ ☐ _____ ☐ FILE

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CLARIFICATION/INFORMATION PROCEDURES

August 13, 2024

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGERS IN THE WORK

- A. Owner will issue through Project Coordinator, supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Project Coordinator will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Project Coordinator are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 10 days, after receipt of Proposal Request, Contractor shall submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.

- d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- e. Quotation Form: Use forms acceptable to Engineer.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner's Project Coordinator.

- 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
- 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
- 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
- 4. Include costs of labor and supervision directly attributable to the change.
- 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
- 7. Proposal Request Form: Use forms acceptable to Engineer.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Project Coordinator will issue a Change Order for signatures of Owner and Contractor.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Owner's Project Coordinator may issue a written Construction Change Directive authorizing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

August 13, 2024

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Within 10 days after the effective date of the Contract, submit a complete schedule of values of all lump sum bid items showing the value assigned to each part of the work.
 - 2. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule in sufficient detail to serve as the basis for progress payments during construction.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Arrange schedule of values consistent with format that is satisfactory to the Project Coordinator.
 - 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
 - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site.
 - 4. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 - 5. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.

6. Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
7. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.

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8. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and Project Coordinator, and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Project Coordinator by the 5th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
- D. Application Preparation: Complete every entry on the agreed to form. Execute by a person authorized to sign legal documents on behalf of Contractor. Project Coordinator will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit two signed original copies of each Application for Payment to Project Coordinator by a method ensuring prompt receipt. One copy shall include waivers of lien and similar attachments if required as well as notarization of the authorized signature, if required.
 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

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5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Products list (preliminary if not final).
5. Sustainable design action plans, including preliminary project materials cost data.
6. Schedule of unit prices.
7. Submittal schedule (preliminary if not final).
8. List of Contractor's staff assignments.
9. List of Contractor's principal consultants.
10. Copies of building permits.
11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
12. Initial progress report.
13. Report of preconstruction conference.
14. Certificates of insurance and insurance policies.
15. Performance and payment bonds.
16. Data needed to acquire Owner's insurance.

H. Application for Payment at Substantial Completion: After Project Coordinator issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706.
 5. AIA Document G706A.
 6. AIA Document G707.
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

August 3

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

SECTION 01 31 00

COORDINATION

PART I - GENERAL

1.01 SECTION INCLUDES A.

Project Meetings

- B. Submittals Requirements
- C. General Contractor Coordination
- D. Coordination of Subcontractor and Separate Contracts
- E. Owner Criteria

1.02 RELATED REQUIREMENTS

- A. Section 011100 – SUMMARY OF THE WORK: Description of Contract Documents.
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 014500 – QUALITY CONTROL
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 015100 – TEMPORARY UTILITIES
- G. Section 015200 – CONSTRUCTION FACILITIES
- H. Section 015500 – VEHICULAR ACCESS AND PARKING: Traffic Regulation.
- I. Section 015600 – TEMPORARY BARRIERS, ENCLOSURES AND CONTROLS
- J. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- K. Section 016100 – PRODUCT REQUIREMENTS
- L. Section 017300 – CUTTING AND PATCHING
- M. Section 017700 – CLOSEOUT PROCEDURES: Coordination of completion reviews, inspections, and submission of documents.
- N. Section 017800 – CLOSEOUT SUBMITTALS: As-Built Documents.
- O. Division 21 - Fire Protection Systems.

P. Division 28 - Fire Alarm Systems

1.03 MEETINGS

- A. Pre-Construction/Site Mobilization Conference: Owner's Representative will administer site mobilization conference at Project site for clarification of responsibilities of Owner, Owner's Representation and Contractor, use of site and for review of administrative procedures. Site mobilization conference shall be held within fourteen (14) calendar days of Notice to Proceed, unless otherwise directed by Owner's Representative.

1. Agenda: Pre-Construction/Site Mobilization Conference shall cover the following topics at a minimum:

- a. Special Project Procedures: Implementation of requirements as specified in Section 013100 – COORDINATION.
- b. Subcontractors List: Provide PDF electronic file. Distribute and discuss list of subcontractors and suppliers.
- c. Construction Schedule: Provide per Section 013200. Distribute and discuss initial construction schedule and critical work sequencing of major elements of Work, including coordination of Owner furnished Contractor installed (OFCI) products, Owner furnished/ Owner installed (OFOI) products, and work under separate contracts, by utility agencies and companies and Owner.
- d. Designation of Key personnel: Designate key personnel and update project directory for Owner, Owner's Consultants, Contractor, major subcontractors, major materials suppliers, serving utility agencies and companies, other contractors performing work under separate contracts and governing authorities having jurisdiction.
- e. Project Communication Procedures: Review requirements and administrative requirements for written, electronic and oral communications.
- f. Change Procedures: Review requirements and administrative procedures for Change Orders, Field Orders, Owner's Representative's Supplemental Instructions, and Contractor Requests for Information.
- g. Coordination: Review requirements for Contractor coordination of Work; review sequence and schedule for work being performed for Owner under separate contracts.
- h. Submittals Administration: Provide per Section 013300 and Section 016100. Review administrative procedures for shop drawings, project data and sample submittals and review of preliminary submittals schedule.
- i. Project As-Built Documents: Provide per Section 017700 and Section 017800. Review requirements and procedures for project as-builts, specifications and other documents.
- j. Construction Facilities and Temporary Utilities: Provide per Section 015100 and Section 015200. Designate storage and staging areas, construction office areas; review temporary utility provisions; review Owner requirements for use of premises.

- k. Materials and Equipment: Review substitution requirements; review schedule for major equipment purchases and deliveries; review materials and equipment to be provided by Owner (OFCI and OFOI products).
 - l. Site Access by Owner's Representative and Owner's Consultants: Review requirements and administrative procedures Contractor may institute for identification and reporting purposes.
 - m. Testing and Inspection: Provide per Section 014550 and other sections of the Contract. Review tests and inspections by independent testing and inspection agencies, manufacturers, and governing authorities having jurisdiction.
 - n. Permits and Fees: Review Contract requirements; review schedule and process for obtaining permits and paying fees.
 - o. Hours of Work and Work Restrictions per Section 011400.
 - p. Hot Works Permit.
- B. Billing Meetings: A billing meeting will be conducted by the Owner's Representative each month prior to submittal of the Application for Payment. Agenda: review of the percent complete relating to the submitted Schedule of Values. Prior to the Billing Meeting the Contractor will submit a draft of the Application for Payment for review by the IOR and Owner Representative.
- C. Progress Meetings: Progress meetings shall be periodically scheduled throughout progress of the Work. Frequency shall be as determined necessary for progress of Work. Generally, it is intended progress meetings be held once a week as designated by the Owner's Representative.
- 1. Administration: Owner's Representative shall make physical arrangements for meetings and prepare agenda with copies for participants, preside at meetings, record minutes, and distribute an electronic file within four (4) workdays to Contractor, Owner's Consultants, and other participants affected by decisions made at meetings.

2. Attendance: Contractor's Project Manager and jobsite Superintendent shall attend each meeting. Contractor's subcontractors and suppliers may attend as appropriate to subject under discussion. Owner will have a representative at each meeting. Owner's Consultants, as appropriate to agenda topics for each meeting and as provided in Owner/Consultant Agreement, will also attend.

a. Suggested Agenda for Progress Meetings:

- 1) Building Code/Fire Marshal Issues
- 2) Design Issues
- 3) Submittals and Long Lead Items
- 4) OFCI and OFOI products.
- 5) Request for Information
- 6) Safety Issues
- 7) Scheduling Status/1 Week Prior and 3 Week Look Ahead
- 8) Potential Schedule Delay Issues
- 9) Incomplete or Non-Conforming Work
- 10) Inspection Requests
- 11) Utility Shutdowns and Dig Notifications
- 12) Instructional Bulletins and Field Orders
- 13) Change Orders/Cost Proposals
- 14) Payment Applications and As-Built Documents
- 15) Miscellaneous Business
- 16) Other items affecting progress of the Work

- D. Guarantees, Bonds, Service and Maintenance Contracts Review Meeting: Eleven months following the date of Substantial Completion, a meeting will be conducted by Owner's Representative to review the guarantees, bonds and service and maintenance contracts for materials and equipment.

- E. In addition to meetings listed above, Contractor shall hold coordination meetings and preinstallation conferences to assure proper coordination of Work.

1. Pre-installation Conferences: When required in individual Specification Sections, convene a pre-installation conference prior to commencing Work.

- a. Require attendance by representatives of firms whose activities directly affect or are affected by the Work specified.

- b. Review conditions of installation, preparation and installation procedures and coordination with related Work and Work under separate contracts.
- F. Location of all meetings will be as designated by Owner's Representative. Participants at all meetings shall be Owner's Representatives, Consultants and/or Vendors, Contractor, Superintendent, Subcontractors, and others as appropriate.

1.04 SUBMITTALS

A. Coordination of Submittals: Schedule and coordinate submittals as specified in Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES, Section 017700 – CLOSEOUT PROCEDURES and Section 017800 – CLOSEOUT SUBMITTALS.

- 1. Coordinate submittal effort of various trades, subcontractors and suppliers having interdependent responsibilities for installing, connecting, and placing into service such equipment, materials or installations as necessary for the Work.
- 2. Coordinate requests for substitutions to assure compatibility of space, operating elements, and effect on work of others.
- 3. Contractor shall submit the following submittals to the Owner's Representative who will forward directly to the appropriate State Agencies for their review and approval:
 - a. Fire Protection Drawings: Refer to Division 21
 - b. Fire Alarm System: Refer to Division 28

B. Coordination/Engineering Drawings: Submit in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES and as specified herein. C. Work Plans: Submit as specified herein.

1.05 COORDINATION

A. Coordination: Contractor shall coordinate the Work as stated in the General Conditions of the Contract. Work of the Contract includes coordination of the entire work of the Project, from beginning of construction activity through Project closeout and warranty periods. Contractor shall also coordinate Work under the Contract with work under separate contracts by Owner. Contractor shall cooperate with Owner and others as directed by Owner's Representative in scheduling and sequencing the incorporation into the Work of

Owner Furnished/Contractor Installed (OFICI) products identified in the Contract Documents.

- 1. Coordinate completion and cleanup of work of the separate trades, subcontractors, vendors, etc., in preparation for Owner occupancy.
 - 2. After Owner occupancy, coordinate access to site by various trades, subcontractors, vendors, etc., for correction of defective work and/or work not in accordance with Contract Documents, to minimize Owner disruption.
 - 3. Assemble and coordinate closeout submittals specified in Section 017700 – CLOSEOUT PROCEDURES.
- B. Construction Interfacing and Coordination: Layout, scheduling and sequencing of Work shall be solely Contractor 's responsibility. Contractor shall bring together the various parts, components, systems and assemblies as required for the correct interfacing and integration of all elements of

Work. Contractor shall coordinate Work to correctly and accurately connect abutting, adjoining, overlapping and related elements, including work under separate contracts by Owner and utility agencies, if any.

- C. Installation of Systems into Project Space: Follow routings shown for pipes, ducts and conduits as closely as practicable, as shown on the Contract Documents with due allowance for available physical space; make runs parallel with line of building. Utilize space efficiently to maximize accessibility for other installations, future maintenance and repairs. In finished areas, except as otherwise shown, conceal pipes, ducts and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- D. Utility Work: Work occurring on or in the immediate vicinity of critical utilities must be directly supervised at all times by Contractor qualified personnel. Requirements stated herein for notification, work plans, dig notification forms and marking locations of existing utilities shall apply. Contractor will be held fully liable for costs and damages due to unplanned interruption of critical utilities, including any personal injury to public, visitors, or staff.
 - 1. Provide supervision and coordination necessary to meet requirements of electrical power connection as set forth by the Pacific Gas and Electric (PG&E).
 - 2. Provide reasonable and convenient staging and access areas to permit PG&E, its vendors or subcontractors, to install, modify or remove electrical transformers or other components of the electrical power system furnished and installed by PG&E.

1.06 COORDINATION OF SUBCONTRACTORS AND SEPARATE CONTRACTS

- A. Conflicts: Conflicts shall be resolved by the Contractor bears primary responsibility for conflict resolution regarding the coordination of all building trades, subcontractors, and suppliers.
- B. Superintendence of Work: Contractor shall appoint a field superintendent who shall direct, supervise, and coordinate all Work in the Contract Documents.
- C. Subcontractors, Trades and Materials Suppliers: Contractor shall require all subcontractors, trades, crafts and suppliers to coordinate their portions of Work with the Superintendent to prevent scheduling, sequencing, dimensional and other conflicts and omissions.
- D. Coordination with Work Under Separate Contracts: Contractor shall coordinate and schedule Work under Contract with work being performed for Project under separate contracts by Owner. Contractor shall make direct contacts with parties responsible for work of the Project under separate contracts, in order to provide timely notifications and to facilitate information exchanges.
- E. Service Connections: Except as otherwise indicated, final connection of mechanical services to general work is defined as being mechanical work; final connection of electrical services to general work is defined as electrical work.

1.07 OWNER CRITERIA

- A. During the Base Construction time, Contractor shall allow Owner 14 calendar days to move Owner equipment and/or provide furnishings. Contractor shall notify Owner's Representative in writing a minimum of fourteen (14) calendar days prior to completion of area described above.
 - 1. Contractor shall show this time as a distinct activity on the detailed project schedule.

- B. Equipment Coordination: Contractor and Owner supplied equipment will require complete installation data be exchanged directly between Contractor and vendors and subcontractors involved as progress of Project requires. Individual requesting information shall advise when it is required. Incorrect, incomplete, delayed or improperly identified equipment causing delay or error in installation will require entity causing such action to be liable for modifications or replacements necessary to provide correct and proper installation, including relocations.
- C. Contractor shall provide large scale casework and equipment drawings for casework and equipment service rough-in locations (dimensioned from building features), service characteristics, and locations of studs or blocking where such locations are critical to mounting or otherwise installing equipment and casework. Furnish sizes and spacing required for mechanical and electrical cutouts, and a complete brochure of fittings, sinks, outlets, or other information to provide a complete assemblage of the items and accessories being furnished.
- D. Interruption of Services: Construction Work shall accommodate Owner's use of surrounding and adjacent premises during the construction period and shall provide continuous public access and use of surrounding and adjacent facilities. Contractor shall not deny access to public use facilities until an alternate means of public use has been provided. An interruption of service is defined as any event which in any way interrupts, disrupts or otherwise discontinues, even momentarily, the services provided by Owner to its patients and staff. Adequate notice, as described below, shall be given to Owner when any interruption of services or interference with the use of existing buildings and roads are anticipated. Any interruption of service will be made only by Owner upon such notice. Interruptions to Owner services will not be made without prior notification and approval by Owner. Contractor shall never interrupt any Owner service without direct Owner participation.
1. Dig Notification: Contractor shall complete and submit for review to Owner's Representative, a Dig Notification Form, included at the end of this section, and obtain written authorization from Owner prior to the commencement of any digging activities. Digging activities include exploratory demolition, soils excavation, concrete core drilling, and saw cutting. Contractor shall include all pertinent information with the Dig Notification Form and submit with detailed work plan fourteen (14) calendar days prior to desired digging activity.
 2. The Contractor shall contact USA North 811 prior to starting underground Work to locate existing underground utilities.
 3. Contractor shall mark locations of all known utilities on ground of dig area with marker paint.
 4. Prior to commencement of digging activities, Contractor shall verify project inspector has inspected the dig site and confirmed the site marking as accurate, complete and in conformance with site utility plans.
 5. Contractor shall verify with Owner's Representative that all interested hospital departments have been notified of intent to begin digging operation.
 6. Record documents are required for dig activities. Contractor shall provide As-Built drawings.
- E. Shutdown Procedures: Contractor shall complete and submit for review and approval to Owner a Request for Shutdown form, included at the end of this section. Contractor shall include all pertinent

information to assist Owner in coordination of shutdown activities. The Shutdown Request Form shall be submitted with a detailed work plan addressing the proposed shutdown not less than fourteen (14) calendar days prior to desired shutdown.

- F. The Owner does not normally charge for its shutdown support services. However, if poor planning and/or poor execution of a shutdown by the Contractor causes excessive time and effort for Owner personnel, the Owner reserves the right to back charge the Contractor for this effort required to support such shutdown.
1. Contractor shall verify with Owner's Fire Marshal that all appropriate Interim Life Safety Measures (ILSM) are in place.
 2. Contractor shall determine that proper and appropriate coordination and notification has been completed, including written authorization from Owner's Representative, prior to shut down.
 3. Service shutdowns shall require specific work plans to be submitted to and coordinated with Owner's Representative. Work Plan should reflect various work trades, activities or entities requiring active participation with Owner teams to coordinating hospital functions with construction activities.
 - a. Contractor shall request, schedule, and conduct a General Work Plan Meeting prior to any work activity occurrence. During this meeting Contractor and Owner shall produce and agree to a list of work activities, which will require digging and/or shutdown coordination and procedures.
 - b. Owner's Representative, upon receiving the agreed submission for coordination, shall schedule the actual digging and/or shutdown at the earliest possible date not later than fourteen (14) calendar days from receipt of the submission. Operation of valves, switches, etc. to affect shutdowns shall be operated by Owner personnel only.
 - c. A shutdown is defined as any interruption of services provided by Owner to its patients and staff.
 4. Planned service shutdowns shall be accomplished during periods of minimum usage. Contractor shall plan work to restore service in minimum possible time and shall cooperate with the Owner to reduce number of shutdowns.
 - a. Notwithstanding the provisions of Article 14.6 of the General Conditions of the Contract, Contractor may be required to perform certain types of work outside normal time periods.
 - 1) Non-normal times shall include, but not be limited to, periods of time before 7:00 a.m. and after 5:00 p.m. in the evening, weekend days, or legal holidays, or such periods of time which constitute split shifts or split working periods.
 - 2) Contractor shall include allocation of the cost of this work as part of the base bid and shall not be entitled to additional compensation as a result of such work during non-normal time periods.
 - 3) Contractor shall include the non-normal periods as distinct activities on the detailed project schedule.

- 4) Contractor is advised and Contractor shall be prepared, at Owner written request, to perform certain shutdown and asbestos related work during non-normal time periods.
- G. Utility locations: Refer to Section 017600. General location of utility lines and services may be shown on the drawings or described elsewhere, Owner does not warrant the accuracy of the locations shown or described. Determination of the actual on-site locations of utility lines and services prior to the commencement of work shall be the responsibility of the Contractor shall complete layout/research for Points of Connection (P.O.C.) and clean/prep piping at P.O.C. All capping, relocation or removal of such lines and services shall be performed by Contractor as a part of the Contract. New/continued piping and services installation shall be prefabricated and in place prior to the shutdown. All materials and tools required to complete the work must be at the shutdown location(s). Contractor shall not assume existing valves will hold 100%. Contractor is required to have at least one (1) alternate method (including parts and equipment) to complete installation once shutdown has started. Note: only wheel type cutters shall be used on copper pipe to reduce contamination to existing systems/valves.
- H. Detailed Work Plans: Contractor shall develop and submit for review and approval to Owner's Representative detailed work plans for specific work activities, both inside and outside the work area, associated with impact to, or interruption of services and operation, and dig activities. Work Plans shall be submitted as a PDF electronic file with Table of Contents indexed. Work Plans shall include written description of work activity, detailed schedule with proposed sequence of operation and activity duration, type of equipment to be used, a copy of site plan highlighted to indicate sequencing and location of work and equipment, completed Request for Shutdown and/or Dig Notification forms as applicable, conformance to ILSM, and control methods for noise, vibration and airborne contaminants.
1. Work Plan submittal will not be accepted unless all required information is provided at time of submittal.
 2. Submit Work Plan at least fourteen (14) calendar days prior to the commencement of any associated work activities.
 3. Coordination/Engineering Drawings: Contractor shall provide a complete set of Coordination/Engineering Drawings that indicates the architectural and structural building components; and combines all piping, conduits, fire sprinkler system, equipment, hangers, braces and other building components into one composite drawing for each floor, wing or area of work. Submit the Coordination/ Engineering Drawings as a bookmarked PDF electronic file. These drawings are for the Contractor's and Owner's use during construction and shall not be construed as replacing any shop drawings, "As-Built", or record drawings required elsewhere in the Contract Documents. Owner's review of these drawings is for design intent only and shall not relieve the Contractor of the responsibility for coordination of all work performed per the requirements of the Contract.
 - a. Contractor shall prepare and submit complete $\frac{1}{4}" = 1' - 0"$ coordination drawings, including plans, sections, details as are appropriate indicating the area layout, complete with debris removal area and materials access points, and all mechanical and electrical equipment in all areas and within above and below ceiling spaces for new and existing conditions, including bottom of all ducts, plenum, pipe and conduit elevations. Drawings shall show all structural and architectural

components, restraints and other obstructions that may affect the work. Electronic or photo reproduction of Owner's Architectural Drawings is not acceptable.

- b. Contractor and each Subcontractor shall ensure all relevant mechanical and electrical equipment, piping, conduit, fire sprinkler system, ceiling hangers, braces etc., are shown and will fit, together with necessary items such as lights, ducts, fans, pumps, piping, conduit and the like.
- c. Contractor shall indicate all locations of expansion/ seismic joints and indicate how expansion for piping, conduit and other components is provided.
- d. Contractor shall indicate all locations for access doors or other means of access at conditions above and below for items requiring access or service including but not limited to valves, mechanical equipment, electrical equipment valves and other components. The Contractor is responsible that piping, conduit, braces and other obstructions do not block access to items indicated above.
- e. Submit completed and fully coordinated PDF electronic indexed file drawings with bookmarked Sheet Index together with Contractor comments indicating possible areas of conflict for review to Owner's Representative prior to start of work.
- f. Penetrations: Contractor shall prepare a sleeving layout (1/4" scale) indicating size and locations of sleeves. Trades shall indicate to Contractor their requirements and locations. PDF electronic files to applicable trades and Owner's Representative.
- g. Completion of work: All coordination drawings shall be submitted together with record (as built) drawings of all trades involved in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Request for Shutdown (RFS) Info/Impact Report
- B. Dig Notification Form

END OF SECTION 01 31 00

REQUEST FOR SHUTDOWN (RFS) INFO/IMPACT REPORT

PROJECT NAME: _____

OWNER RFS# _____

PROJECT #: _____ HCAI #: _____ CONTRACTOR RFS #: _____

TODAY'S DATE: _____ SHUTDOWN DATE: _____ SUSPEND DATE: _____

TO: COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 <u>Project Manager's email address:</u> <u>Joseph.Cooper@lakecountyca.gov</u>	FROM: _____ _____ _____ _____ _____
---	--

Request Date: _____ Shutdown Target Date: _____

Requested By: _____ Requestor's Phone #: _____

Shutdown Work (Utility Specific): _____

Scope (Brief Description of Work): _____

Impact (Areas & Users): _____

Additional Comments: _____

DIG NOTIFICATION FORM

PROJECT #: _____ HCAI#: _____ DATE: _____

TO: COUNTY OF LAKE _____	FROM: _____
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PUBLIC SERVICES
333 2nd Street
Lakeport, CA 95453

P:707-262-1618
C:707-245-6911

Project Manager's email address:
Joseph.Cooper@lakecountycalifornia.gov

1. Has USA been notified? YES ___ NO ___
When?

2. Are all known utilities marked? YES ___ NO ___

3. Location of dig shown on attached site plan? YES ___ NO ___
Purpose

4. Dates digging will take place _____
Place _____

Signed:

OWNER USE ONLY

Date received:

1. Utilities verified by IOR? YES ___ NO ___

2. Dig activities coordinated with all parties? YES ___ NO ___

3. Comments:

Date Authorized: _____ Signed: _____ Date _____ Returned: _____

Signed:

Comments: (Utilities encountered, disruptions, successes, weather, etc.)

Copies:	Owner _____	Consultants _____	File _____

SECTION 01 32 00

CONTRACT SCHEDULES

PART I - GENERAL

1.01 SCOPE

- A. Preliminary Contract Schedule, Contract Schedule, updated Contract Schedules, Short Interval Schedules (SIS), Recovery Schedules and As Built Schedule.
- B. Sub-networks of activities (Fragnets) supporting Time Extension Requests.

1.02 DEFINITIONS

- A. Construction Schedule/CPM Schedule/Schedule: The most recent; Baseline Schedule, Updated Schedule or Revised Schedule.
- B. Final Baseline Schedule: A final and ongoing Schedule for the project that has been reviewed and accredited by the Owner's Representative
- C. Critical Work activities are defined as Work activities that, if delayed or extended, will cause a critical delay as defined in General Conditions Article 8. All other Work activities are defined as non-critical Work activities and are considered to have float.
- D. Float is defined as the time that a non-critical Work activity can be delayed or extended without causing a critical delay as defined in General Conditions Article 8. Neither the Contractor nor the Owner shall have an exclusive right to the use of float. Float is a shared resource available to each party to the contract. The Contractor shall document the effect of the use of float on the updated Contract Schedule.
- E. Recovery Schedule: Schedule required when any Revised Schedule or Update Schedule shows the work to be more than 14 calendar days behind the latest Owner-accepted contract end date.
- F. Short Interval Schedule (SIS): Schedule prepared on a weekly basis demonstrating the work accomplished the prior week and work planned for the upcoming three weeks.

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples:
 - 1. Proposed Scheduling Software and qualifications of individual preparing schedules.
 - 2. Preliminary Contract Schedule
 - 3. Contract Schedule including graphical and tabular reports.
 - 4. Monthly Updates to Contract Schedule, including Narrative Report.

5. Short Interval Schedules
 6. Final As-Built Schedule
- B. Include an electronic version of all submittals required by this specification, including Narrative prepared in MS Word or .pdf format, CPM schedule in .xer file (P6 backup) or other schedule native file format if accepted under 1.3. A.1 above, .pdf of full schedule, and .pdf of critical path. The following fields shall be included:
1. Activity identification
 2. Activity description
 3. Duration, start, and finish dates.
 4. Percentage of completion
 5. Total float
 6. Responsible party
 7. Predecessors and successors

PART II - PRODUCTS

2.01 SOFTWARE

- A. The Contractor shall use Primavera P6 by Oracle Corporation, or equal to produce the schedule and all required graphical and tabular reports.

PART III - EXECUTION

3.01 PRELIMINARY CONTRACT SCHEDULE

- A. Within 10 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall submit the Preliminary Contract Schedule in both native and .pdf format to the Owner's Representative for acceptance. The Preliminary Contract Schedule shall represent the Contractor's plan for accomplishing the work within the Contract time showing all significant milestones for the Contract period as well as a detailed work plan for the first 90 calendar days following the Notice to Proceed. This detailed work plan shall identify in detail the following activities for the first 90 calendar days:
1. Preparation of equipment and material submittals for review. List Project submittals within Schedule per each specification section including Division 1 requirements. Indicate dates for submission of required submittals. Note: schedule shall include 18 calendar days for the Owner's review of the Preliminary Contract Schedule.
 2. Make submissions within the following number of days after the Notice to Proceed:
 - a. Items needed in initial stages of Work or requiring long lead-time for ordering: 30 calendar days.

- b. Deferred approval submittals, for review and approval by agencies such as Owner's when required: 60 calendar days.
 - c. Electrical, mechanical and equipment items other than those covered by item "a" above: 60 calendar days.
 - d. All other items: 90 calendar days.
 - 3. Procurement schedule.
 - 4. Critical Path for the first 90 calendar days.
 - B. The Preliminary Contract Schedule shall acknowledge significant known constraints and include all anticipated activities prior to the Notice to Proceed.
 - C. The Preliminary Contract Schedule shall not include any actual dates or progress measured against any activities.
 - D. Acceptance of the Preliminary Contract Schedule is a condition for approval of the first progress payment application.
 - E. The Contractor's progress shall be measured against the Preliminary Contract Schedule until such time as the Owner accepts the Contractor's first Contract Schedule. The Preliminary Contract Schedule shall be incorporated into the Contractor's proposed Contract Schedule.
 - F. Unless approved by the Owner's Representative, there shall be no activities shown with durations greater than 14 calendar days (excluding submittals, submittal reviews, and procurement activities).
- 3.02 CONTRACT SCHEDULE (BASELINE)
- A. The Contract Schedule shall represent a practical plan to fully complete the Contract within the Contract Time. The Contract Schedule shall include a complete sequence of construction, in adequate detail for coordination of the Work and shall be coordinated with the preparation of the Schedule of Values per 01 29 00 Measurement and Payment.
 - B. Form
 - 1. The proposed first contract schedule shall be produced using CPM (Critical Path Method) techniques, in the PDM (Precedence Diagram Method) method of scheduling. The Contract Schedule shall be calculated using the Retained Logic method. Progress override calculations shall not be acceptable. The schedule shall not use negative float or constraints on work activities.
 - 2. The Contract Schedule shall identify all holidays and non-working days.
 - 3. Identity of the party responsible for the activity (i.e., Owner, General Contractor, specific subcontractor, etc.)
 - 4. The Contract Schedule activities shall be coded with the following information applicable to each activity:

- a. Area of the project
- b. Identity of the party responsible for the activity (i.e., Owner, General Contractor, specific subcontractor...)
- c. Specification section applicable to activity
- d. Phase
- e. Sequence – The following sequences shall be identified:
 - 1) Administrative
 - 2) Submittal and Review
 - 3) Fabrication
 - 4) Construction: including phasing and sequencing as identified in 011400 Work Restrictions
 - 5) Inspection, Commissioning, and Close-out

C. Content

1. The Contract Schedule shall identify all Work activities in correct sequence for the completion of the Work within the Contract Time. Work activities shall include the following:

- a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or Owner's Representative's prior acceptance.
 - 1) Show dates for the submission, review, and approval of each such submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by the Owner.
 - 2) The schedule shall allow submittal review time in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples.
- b. System test dates.
- c. Scheduled overtime Work to the extent permitted by Contract Documents.
- d. Dates Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the Owner.
- e. Dates Contractor requests orders and decisions from the Owner on designated items.
- f. Dates Contractor requests Owner-furnished equipment.

- g. Dates Contractor requests Owner-furnished utilities.
 - h. Planned dates for shutdown, connection, and relocation of existing utilities.
 - i. Planned dates for connecting to or penetrating existing structures.
 - j. Planned dates for scheduled inspections as required by Codes, or as otherwise specified.
 - k. Commissioning Sequence and activities for all Building Systems.
- 2. Unless approved by the Owner's Representative, there shall be no activities shown with durations in excess of 7 calendar days (excluding submittals, submittal reviews, and procurement activities). Milestones should be listed for the completion of wings, floors, and other similar areas.
 - 3. The allowable monthly rain days per the Supplemental Conditions shall be incorporated into the Schedule.
 - 4. Identify types of calendars used and the logic of their application.

D. Submission

- 1. The first Contract Schedule shall be submitted to the Owner not later than 30 calendar days after Notice to Proceed. The period covered by Contract Schedule shall be the Contract Time as specified in the Notice to Proceed. The Contract Schedule shall incorporate the logic of the Preliminary Contract Schedule covering the first 90 calendar days following the Notice to Proceed. Items to be included with first submission:
 - a. Contract Schedule (Baseline)
 - b. Critical Path Schedule excluding all non-critical Work activities.
 - c. Narrative
- 2. Tabular Computer Reports
 - a. As requested by the Owner, the Contractor shall submit various computer-generated tabular reports.
 - b. As requested by the Owner's Representative, the Contractor will be required to submit additional Schedule Reports.

E. Acceptance

- 1. Upon receipt, the Owner's Representative shall review the proposed first Contract Schedule. Within 21 calendar Days of the Owner's receipt of the proposed first Contract Schedule, the Owner's Representative shall schedule a review meeting with the Contractor for the purpose of jointly reviewing the proposed first Contract Schedule.

2. If the proposed first Contract Schedule is accepted by the Owner's Representative, it shall become the Contract Schedule (or Baseline Schedule). Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the Contract Schedule.
3. If the Contractor or the Owner's Representative determines the proposed first Contract Schedule to need revision, the Contractor shall revise and resubmit the proposed first contract schedule to the Owner's Representative within 14 calendar days for acceptance. If accepted, it shall become the Contract Schedule. Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the Contract Schedule. If not accepted the Contractor will resubmit within 10 calendar days for a new review period to start.
 - a. No progress payment beyond the second progress payment will be paid to the Contractor until such time as the Owner's Representative has approved the Contractor's first proposed Contract Schedule.

F. Schedule Logic

1. Activity schedule logic should normally be of Finish-to-Start relationship type and assembled to show order in which Contractor proposes to carry out the Work. The logic should indicate restrictions of access, availability of Work areas, and availability and use of manpower, materials, and equipment. Form basis for assembly of schedule logic on the following criteria:
 - a. Indicate which activities must be completed before subsequent activities can be started.
 - b. Indicate which activities can be performed concurrently.
 - c. Indicate which activities must be started immediately following completed activities.
 - d. Indicate resource sequencing due to availability or space restrictions.
 - e. Lags shall not be used if can be represented with additional schedule detail. Finish-to-start logic ties with positive lags are not permitted. All positive time consumption should be represented by a schedule activity. Start-to-start, or finish-to-finish logic ties with negative lags are not permitted.
 - f. Lags in Start-to-Start or Finish-to-Finish relationships must not exceed the duration of the predecessor or successor activity, respectively.

G. Non-Sequestering of Float

1. Contractor shall not sequester float through scheduling techniques, including, but not limited to, constrained dates, extending Work Activity duration estimates, using preferential logic, such as lag or negative lag (lead), unless specifically requested in writing and approved by Owner's Representative. It is acknowledged that Owner-caused or Contractor-caused time

savings to Activities on, or near, the critical path will increase float, such increase in float shall not be for the exclusive use or benefit of either Owner or Contractor.

H. Out of Sequence Logic:

1. Resolution of conflict between actual work progress and schedule logic: When out of sequence activities develop in Schedule because of actual construction progress, Contractor shall submit revision to schedule logic to conform to current status and direction and include reasons in schedule update Narrative.

I. Preferential Logic:

1. The intended purpose of scheduling on a construction project is to help ensure that Contractor's work on the project is adequately planned, tracked and managed. A construction schedule can be as simple as a list of activities, organized in a logical sequence, and time scaled. The concept of construction scheduling is to see that all activities necessary to complete the work, in accordance with the contract documents requirements, are properly planned, coordinated and managed. When Contractor's schedule activities are not sequenced in the most logical manner, but rather, in a manner as to create the maximum possible opportunity for Owner interference to claim delay or interruption, the Owner will reject the schedule with a request of different sequence of activities.

3.03 EXPERIENCE REQUIREMENTS

- A. Contractor shall designate an individual from Contractor's staff or a consultant who shall be responsible throughout the duration of the project for preparation of all schedules and reports as required by this specification. This individual shall also be required to attend all meetings with the Owner's Representative as required by this specification. The Contractor shall demonstrate to the satisfaction of the Owner that the individual or consultant has at least 3 years of experience preparing, maintaining, and administering detailed project schedules on projects of the same or similar size and complexity as this project. The Contractor shall also demonstrate to the satisfaction of the Owner that the individual or consultant is proficient in the use of the scheduling software proposed for use by the Contractor on this project.
- B. Within 14 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall provide the Owner with the identification, qualifications, and experience of and references for the proposed individual or consultant.

3.04 MONTHLY UPDATES

- A. After acceptance of the first proposed Contract Schedule, Contractor shall update the Contract Schedule monthly. The update shall reflect progress as of the end of each month. Contractor shall submit monthly schedule update to the Owner's Representative for acceptance with the draft payment application and no later than the tenth day of the following month. The updates shall be made as follows:
 1. The Monthly updates shall report progress based upon percent complete of each activity or remaining duration. Actual start dates shall be recorded for those activities that have started. Actual finish dates shall be recorded for those activities that are completed. Activities that are in progress shall reflect an actual start date and the percentage completion for the activity. Actual dates shall be clearly distinguishable from projected dates.

2. The updated Contract Schedule shall reflect an up-to-date status of the contract work as completed, and materials furnished and in permanent place that qualify for payment.
 3. The updated Contract Schedule shall reflect Contract Time changes included in all processed change orders for the progress month and each preceding month.
- B. Within 5 calendar days after receipt of the updated Contract Schedule in conjunction with the Application for Payment, the Owner's Representative shall review both and determine which work and material pay items qualify for payment; the approved data will then be returned to the Contractor for input. Within 14 calendar days, the Contractor and the Owner's Representative shall meet to review the Construction CPM Schedule and discuss any changes required.
- C. The Contractor shall then revise and resubmit (if required) the Updated Contract Schedule and Application for Payment to the Owner's Representative for payment approval.
- D. The monthly update shall be calculated using retained logic with a required finish date specified as the current contract completion date. Progress Override calculations shall not be acceptable.
- E. No Applications for Payment will be processed, nor shall any progress payments become due until updated Contract Schedules are accepted by Owner's Representative. The accepted, updated Contract Schedule shall be the Contract Schedule of record for the period it is current and shall be the basis for payment during that period. Acceptance of any updated Contract Schedules shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the updated Contract Schedules.
- F. Contractor shall perform the Work in accordance with the updated Contract Schedule. Contractor may change the Contract Schedule to modify the order or method of accomplishing the Work only with prior agreement by the Owner.
- G. With each monthly updated Contract Schedule, the Contractor shall provide an accompanying narrative describing the progress anticipated during the upcoming month, critical activities, delays encountered during the prior month, delays anticipated during the upcoming month, and an audit of the Contract Time. The audit shall show current days allowed by contract, days used through the end of the month, days remaining, percent of time used to date, and percent complete as measured by cost loaded schedule, and days ahead of or behind schedule. In the event that the Contractor was delayed by any occurrence during the prior month, the narrative report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an accounting of days lost or gained.
- H. In the event the monthly update shows the Contractor to be behind schedule (negative float), the narrative shall include a description of actions needed to bring the project back on schedule.

3.05 LOOK AHEAD SCHEDULES

- A. Look Ahead Schedule is a schedule derived from the Contract Schedule (or the most current monthly update of the Contract Schedule) which indicates in detail all activities scheduled or worked on for the 1 prior weeks, and all activities scheduled to occur during the next 3 weeks.
- B. Provide detailed Look Ahead Schedules every week.

- C. Submit in 11-inch by 17-inch Gantt chart format.
- D. Look Ahead Schedule shall be generated from the then current Preliminary Contract Schedule, Contract Schedule, or updated Contract Schedule. Activities listed in the Look Ahead Schedule shall reference the activity identification or other such coding for correlation to the activities listed in the Contract Schedule.

3.06 TIME EXTENSION REQUEST DOCUMENTATION

- A. In the event the Contractor shall request an extension of Contract Time, Contractor shall comply with the requirements of the General Conditions, including without limitation, General Conditions Article 8. In addition to the requirements of the General Conditions, as a condition to obtaining an extension of the Contract Time, Contractor shall timely submit a sub-network of the events of the delay that demonstrates the impact to the activities in the Contractor's then current schedule, as well as the impact to the overall completion date of the project.
- B. If the Owner's Representative approves the extension of time, the next monthly updated Contract Schedule shall incorporate the subnetwork with the extension of time. In addition, the monthly updated Contract Schedule shall contain all changes mutually agreed upon by the Contractor and the Owner during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.

3.07 AS BUILT SCHEDULE

- A. As a condition precedent to the release of retention, the last update of the Contract Schedule submitted shall be identified by the Contractor as the "As Built Schedule". The "As Built Schedule" shall be submitted when all activities are 100 percent complete. The "As Built Schedule" shall reflect the exact manner in which the project was actually constructed (including start and completion dates, activities, sequences, and logic) and shall include a statement signed by the Contractor's scheduler that the "As Built Schedule" accurately reflects the actual sequence and timing of the construction of the project.

3.08 WEATHER DAYS ALLOWANCE

- A. Should inclement weather conditions, or the conditions resulting from weather, prevent the Contractor from proceeding with seventy-five (75) percent of the normal labor and equipment force engaged in the current critical activity item(s), (as shown on the latest CPM Progress Schedule accepted by the Owner's Representative), for a period of at least five (5) hours per day toward completion of such operation or operations, and the crew is dismissed as a result thereof, it shall be a weather delay day.
- B. The expected loss of days specified in the Supplementary Conditions, item 3 "Modification of General Conditions, Article 8 – Contract Time", shall be included in a separate identifiable critical activity labeled "Weather Days Allowance" to be included as the last critical activity of the project schedule prior to substantial or final completion (whichever is contractual). The weather allowance activity shall be on, and remain on, the critical path of the project throughout the life of the project until it has been absorbed. Typically, all activity's leading to completion shall go through the weather allowance activity first. When weather days are experienced, and are approved as such by the Owner's Representative, the Contractor shall either:
 - 1. Increase the duration of the current critical activity(ies) by the number of weather days experienced, or
 - 2. Add a critical activity to the schedule to reflect the occurrence of the weather day(s).

- C. The duration of the weather day allowance activity shall be reduced as weather days are experienced and included in the schedule. Any remaining weather days in the weather day allowance activity at the completion of the project shall be considered as float and shall not be for the exclusive use or benefit of either the Owner or Contractor.
- D. The Contractor shall not receive any additional compensation for unavoidable delays due to inclement or unsuitable weather. If all the weather allowance has been used, any additional weather delay experienced by the Contractor may result in a non-compensable time extension upon submission of acceptable supporting documentation to the Owner's Representative.

END OF SECTION 01 32 00

SECTION 01 33 00

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Administrative requirements for shop drawings, product data and samples submittals
- B. Owner's and Owner's Consultant's review of submittals
- C. Contractor's review of submittals
- D. Shop Drawing Submittals
- E. Product Data submittals
- F. Sample submittals
- G. Field Samples and mock-ups
- H. Submittal Schedule requirements

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK: Subcontractor and materials suppliers list.
- B. Section 013200 – CONTRACT SCHEDULES: Submission and review of schedules and submittals.
- C. Section 014500 – QUALITY CONTROL: Test and Inspection Reports.
- D. Section 016100 - PRODUCT REQUIREMENTS
- E. Section 017700 – CLOSEOUT PROCEDURES: Occupancy/Acceptance /Final Payment Submittals.
- F. Section 017800 – CLOSEOUT SUBMITTALS: Preparation of Maintenance and Operating Data.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. General Submittals Review: Submittals shall be made in accordance with requirements specified herein and in individual Sections.
 - 1. Submittals shall be a communication aid between Contractor, Owner's Representative, and Owner's Consultant(s) by which interpretation of Contract Documents requirements may be confirmed in advance of construction.
 - 2. Submit on all products to be used on the Project. Make all submittals through the Owner unless otherwise directed.

- a. The Owner's Representative shall provide timely review of submittals and re-submittals.
 - 1) Owner's Representative shall have twenty-one (21) days from receipt to review all submittals twenty-one (21) days from receipt to review re-submittals.
 - 2) The Fire Marshal shall have twenty-eight (28) days from receipt to review all submittals twenty-eight (28) days from receipt to review re-submittals.
 - 3) Owner's Representative will prepare and keep a log of review time of all submittals.
 3. Substitutions shall be submitted in accordance with Section 016100 – PRODUCT REQUIREMENTS.
 4. Make submittals sufficiently in advance of construction activities to allow shipping, handling and review by the Owner's Representative and their consultants.
- B. Owner's and Owner's Consultants Review: Owner's Consultant's review will be only for general conformance with the design intent of the Contract Documents. Review of submittals is not conducted for purpose of determining accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. Review actions of the Owner's Consultant or Owner shall not relieve Contractor from compliance with requirements of the Contract Documents. Changes shall only be authorized by separate written Change Order in accordance with the General Conditions of the Contract.
- C. Contractors Review: Contractor shall review, mark-up as appropriate and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittal shall clearly show it has been reviewed by Contractor for conformance with the Contract Documents and for coordination with requirements of the Work. Notify Owner's Representative in writing, at time of submission, of any changes in the submittals from requirements of Contract Documents.

1.04 SUBMITTAL REQUIREMENTS

- A. Prompt Submission: Submittals shall be submitted promptly in accordance with Submittal Schedule and in such sequence as to cause no delay in the Work or in the work of any separate contractor. Present information in a clear and thorough manner to aid orderly review.
- B. Preparation: Title each submittal with the Owner's Project Name and the Owner's Project number, submittal date and dates of any previous submissions. Clearly mark each copy to identify product or model.
1. Identify each item on submittal by reference to Drawing sheet number, detail, schedule, room number, assembly or equipment number, Specification number Reference Standard (such as ASTM or Fed Spec Number) and other pertinent information to clearly correlate submittal with Contract Documents.
 2. Include the names of the Contractor, Subcontractor, Supplier and Manufacturer.

3. Include field dimensions, clearly identified as such to establish relationship to adjacent or critical features of the Work or materials.
4. Include pertinent information such as performance characteristics and capacities, wiring or piping diagrams and controls, catalog numbers and similar data.
5. Modify manufacturer's standard schematic drawings and diagrams and other diagrams to delete information not applicable to the Work. Supplement standard information to provide information specifically applicable to the Work.
6. Identify changes from requirements of the Contract Documents.
7. Include 8" x 3" blank space on face of submittal for review stamps.
8. Include Contractor's review stamp, initialed or signed, and dated, certifying to the review of the submittal, verification of materials, field measurements, conditions, and compliance of the information within the submittal with the requirements of the Work and of the Contract Documents. C. Number of submittals required:
 1. Product Data Submittals: Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
 2. Initial/Re-submitted Shop Drawing Review(s): Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
 3. Final Shop Drawing Review and Approval: After obtaining Owner's Representative approval of initial/re-submitted shop drawing submittals, as described in Section 1.04.C.2 above, Contractor shall submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies. Contractor is responsible for providing all approved shop drawings for its use and use by subcontractors and/or suppliers.
 4. Samples: Submit number specified. Samples shall be of sufficient size and quality to clearly illustrate the functional characteristics of the products, with integrally related parts and attachment devices, including full range of colors, textures and patterns.

D. Identifying Submittals: Identify each submittal by Specification section number followed by a number indicating sequential submittal for that Section. Re-submittals shall use the same number as the original submittal, followed by a letter indicating sequential re-submittal. Examples:

- | | | |
|----|-------------|---|
| 1. | 092500 – 1 | First submittal for Section 092500 – Gypsum Board |
| 2. | 092500 – 2 | Second submittal for Section 092500 – Gypsum Board |
| 3. | 092500 – 2A | Re-submittal of second submittal for Section 092500 – Gypsum Board |
| 4. | 092500 – 2B | Second re-submittal of second submittal for Section 092500 – Gypsum Board |

- E. Resubmission Requirements: Revise and resubmit as specified for initial submittal. Identify any Changes other than those requested. Note any departures from Contract Documents or changes in previously reviewed submittals.
- F. Grouping of Submittals: Unless otherwise specifically permitted by Owner's Representative, make all submittals in groups containing all associated items as described

in each Specification Section. The Owner's Representative will reject partial submittals as incomplete.

G. Unsolicited Submittals: Unsolicited submittals will be returned NOT REVIEWED.

1.05 DISTRIBUTION

A. Reproduce and distribute finalized copies of Shop Drawings and Product Data, to the following:

1. Contractor's Project site file.
2. As-built Documents file maintained by Contractor.
3. Pertinent Separate Contractors.
4. Pertinent Subcontractors.
5. Pertinent Supplier or Manufacturer.

1.06 FIELD SAMPLES AND MOCK-UPS

A. Erect at the project site, at a location directed by Owner's Representative, mock-ups to a size as specified.

1. The following mock-ups are required for this project: As defined in Construction Drawings and Specifications.

B. Fabricate each Sample and mock-up to be complete and fully furnished. Unless otherwise agreed, full-size complete samples will be returned and may be incorporated into field mock-ups and Work.

C. Mock-ups shall be removed by the Contractor at conclusion of the Work at no additional cost to the Owner.

1.07 SUBMITTAL SCHEDULE

A. Submittals Schedule: refer to Section 013200 – CONTRACT SCHEDULES.

1. The Submittal Schedule is a schedule for submission of Shop Drawings, Product Data and Samples by Contractor, and the processing and return of same by Owner.
2. Contractor shall prepare the Submittal Schedule as described herein and coordinate it with the Contract Schedule. No submittals will be processed before the Submittal Schedule has been submitted to and accepted by Owner.
3. Submittal Schedule shall be adjusted to meet needs of construction process and the Contract Schedule. Submit PDF electronic file with booked marked table of contents and/or sheet index of the Submittal Schedule after it is completed and each time it is update by Contractor.
4. Contractor shall NOT begin fabrication or Work which requires submittals until the return of final reviewed and approved submittals have been received by the Contractor.

1.08 ENVIRONMENTAL PRODUCT DECLARATIONS

- A. Contractor must comply with Buy Clean California Act requirements per California Public Contract Code, Sections 3500-3505.
- B. Contractor shall submit to Project Manager/Construction Manager current facility-specific Environmental Product Declaration for each eligible material proposed to be used on the Project.
- C. Environmental Product Declaration (EPD): Type III environmental impact label, as defined by the International Organization for Standardization (ISO) standard 14025, or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance, and integrity.
- D. Eligible Materials: Any of the following:
 - 1. Carbon steel rebar.
 - 2. Flat glass.
 - 3. Mineral wool board insulation.
 - 4. Structural steel.
- E. Eligible Materials installed on the Project by Contractor must comply with any standards to the extent established in the BCCA or by Owner, whichever is more stringent. The facility-specific global warming potential for any Eligible Materials must not exceed any existing maximum acceptable global warming potential for that material pursuant to the BCCA or by Owner, whichever is more stringent ("EM Standards"). The standards are published on the Department of General Services (DGS) website and updated information can be found on this link: <https://www.dgs.ca.gov/PD/Resources/Page-Content/Procurement-DivisionResources-List-Folder/Buy-Clean-California-Act>
- F. Contractor shall not install any eligible materials on the project before submitting a facility-specific Environmental Product Declaration for that material.
- G. This section shall not apply to an eligible material for a particular contract if the Owner determines, upon written justification published on its Internet website, that requiring those eligible materials to comply would be technically infeasible, would result in a significant increase in the project cost or a significant delay in completion, or would result in only one source or manufacturer being able to provide the type of material needed by the state.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 33 00

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Relationship between Code, Ordinances, Standards and Contract Documents
- B. Applicable Codes, Laws and Ordinances
- C. Project Inspections
- D. Lakeport Fire District Fire Marshal Requirements

1.02 RELATED SECTIONS

- A. Section 013500 – SPECIAL PROCEDURES
- B. Section 014200 – REFERENCES
- C. Section 014500 – QUALITY CONTROL

1.03 RELATIONSHIP BETWEEN CODES, ORDINANCES, STANDARDS AND THE CONTRACT DOCUMENTS

- A. Authority: All codes, ordinances and standards referenced in Contract Documents shall have full force and effect as though printed in their entirety in the Contract Specifications.
- B. Precedence:
 - 1. Where specified requirements differ from requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
 - 2. Where Contract Drawings or Contract Specifications require or describe products or execution of better quality, higher standard or greater size then required by applicable codes, ordinances and standards, the Contract Drawings and Contract Specifications shall take precedence so long as such increase is legal.
 - 3. Where no requirements are identified in Contract Documents, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.04 APPLICABLE CODES, LAWS AND ORDINANCES A.

Building Codes, Laws, and Regulations:

- 1. Work shall meet or exceed the requirements of and be performed in accordance with applicable, adopted code requirements, laws and requirements of all other regulatory agencies, including, but not limited to the following:
 - a. California Code Series - 2022 Edition

- 1) California Administrative Code, California Code of Regulations – Title 24, Part 1
 - 2) California Building Code, California Code of Regulations – Title 24, Part 2, Volume 1& 2
 - 3) California Electrical Code, California Code of Regulations – Title 24, Part 3
 - 4) California Mechanical Code, California Code of Regulations – Title 24, Part 4
 - 5) California Plumbing Code, California Code of Regulations – Title 24, Part 5
 - 6) California Energy Code, California Code of Regulations – Title 24, Part 6
 - 7) Elevator Safety Construction Code, California Code of Regulations – Title 24, Part 7
 - 8) California Historical Building Code, California Code of Regulations – Title 24, Part 8
 - 9) California Fire Code, California Code of Regulations – Title 24, Part 9
 - 10) California Existing Building Code, California Code of Regulations – Title 24, Part 10
 - 11) California Referenced Standards Code, California Code of Regulations – Title 24, Part 12
- b. NFPA Code Series. National Fire Protection Association (NFPA) (as adopted by State agencies)
- 1) NFPA 13 – Standard for the Installation of Sprinkler Systems.
 - 2) NFPA 14 – Standard for the Installation of Standpipe and Hose System
 - 3) NFPA 72 – National Fire Alarm and Signaling Code
 - 4) NFPA 80 – Standard for Fire Doors and Other Opening Protectives
 - 5) NFPA 101 – Life Safety Code
 - 6) NFPA 252 – Standard Methods of Fire Tests of Door Assemblies
 - 7) NFPA 701 – Standard Methods of Fire Tests of Flame Propagation of Textiles and Films
- c. California Code of Regulation Series (embodied in California model codes as noted above)

- 1) Title 8, Industrial Relations
 - 2) Title 17, Public Health (Chapter 7)
 - 3) Title 19, Public Safety
 - 4) Title 21, Public Works
 - 5) Title 22, Social Security
 - 6) Title 24, Parts 1, 2, 3, 4, 5, 9 and 12
 - 7) Title 25, Energy Insulation Standards
- d. Americans with Disabilities Act (ADA) 2010 (Federal Law)
 - e. Rules and regulations of private and public utilities
 - f. American National Standards Institute (ANSI)
 - g. American Society of Testing Materials (ASTM)
 - h. Federal Specifications (Fed. Spec.)
 - i. Underwriters Laboratories
 - j. Traffic controls per California MUTCD requirements
2. All dates to comply with editions adopted and accepted by Owner and Lakeport Fire District (AHJ/FIRE).
 3. Unless otherwise specified, specific references to codes, regulations, standards, manufacturers' instructions, or requirements of regulatory agencies, when used to specify requirements for materials or design elements, shall mean the latest edition of each in effect at the date of submission of bids, or the date of the Change Order, as applicable.
 4. References on Drawings or in Specifications to "code" or "building code" not otherwise identified shall mean the codes specified above, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction having authority over the project. B. Other Applicable Laws, Ordinances and Regulations:
 1. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
 2. Work shall be accomplished in conformance with all regulations of Public Utilities and utility districts.
 3. Where such laws, ordinances, rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to

Contract Time or Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to execution date of the Agreement.

4. General Contractor shall not self-perform specialty contracting work defined in sections 7055 – 7059.1 of the California Business and Professions Code unless the General Contractor has the specialty contractor's license appropriate for the work performed. Otherwise, specialty contractors shall be retained by the contractor to perform specialty work identified in the project scope.

1.05 PROJECT INSPECTIONS

A. Provision of inspectors by Owner, if any, and Information pursuant to this Section and Section 1.04 above shall be subject to the following:

1. Contractor shall allow inspectors full access to Project at all times.
2. Contractor shall not take any direction, approvals or disapprovals from inspectors.
3. Contractor shall not rely on inspectors to ensure Work is completed in accordance with Contract Documents.
4. Acts of omissions of any inspector (including without limitation inspector's failure to observe or report deficiencies in Contractor's Work) shall not relieve Contractor for responsibility to complete Work in accordance with Contract Documents.

1.06 DEFERRED APPROVAL

A. Where noted in the Contract Documents, certain items of materials and/or systems may require deferred approval pending submittals of shop drawings. For these items, Contractor shall submit details and structural calculations for anchorage, to comply with State of California Code of Regulations Title 24, table T17-23-J. Calculations shall be made by a licensed Structural Engineer registered in the State of California.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 41 00

SECTION 01 42 00

REFERENCES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Definitions and terms used in Contract Documents
- B. Reference Standards used in Contract Documents
- C. Common abbreviations and acronyms which may be used in Contract Documents

1.02 RELATED SECTIONS

- A. Section 014100 – Regulatory Requirements

1.03 DEFINITIONS OF TERMS

- A. Basic Contract Definitions: Words and terms governing the Work are defined in the General Conditions of the Contract, provided in the Contract Documents.
- B. Additional words and terms are used in the Drawings and Specifications and are defined as follows:
 - 1. Applicable: As appropriate for the particular condition, circumstance or situation.
 - 2. Approve (d): Used in conjunction with action on submittals, applications, and requests, is limited to duties and responsibilities stated in the General Conditions. Approvals shall only be valid if obtained in writing and shall not apply to matters regarding the means, methods, techniques, sequences and procedures of construction. Approval shall not release Contractor from responsibility to fulfill Contract requirements.
 - 3. And/or: If used, shall mean that either or both items so joined are required.
 - 4. By others: Work on the project that is outside the scope of Work to be performed under the Contract, but that will be performed by Owner, separate contractors or other means.
 - 5. Contractor-Furnished/Owner-Installed (CFOI): Items, systems or equipment purchased by the Contractor as part of the project and handed over to the Owner for installation.
 - 6. Construction Site: Same as site.
 - 7. Directed: As instructed by Owner or Owner's Representative, in writing, regarding matters other than the means, methods, techniques, sequences and procedures of construction. Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by Owner's Representative", requested by Owner's Consultant" or Owner's Representative and similar phrases. No implied meaning shall be interpreted to extend the Owner's Representative responsibility into Contractor's supervision of construction.

8. Equal or Equivalent: As determined by the Owner's Consultant as being of the same quality, appearance, utility, durability, finish, function, suitability, and performance.
9. Furnish: Means "supply and deliver, ready for unloading, unpacking, assembly, installation, and similar operations".
10. Indicated: Refers to graphic representations, notes or schedules on Drawings, or Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used, it is to help locate the reference.
11. Install: Describes operations at the site including unloading, unpacking, assembly, erection, anchoring, applying, working to dimension, protecting, cleaning, and similar operations.
12. Installer: "Installer" is the ~~Contractor~~Contractor, or an entity engaged by the Contractor, as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - a. Experienced Installer: The term "experienced", when used with "installer" means having a minimum of five (5) previous Projects similar in size to this Project, and familiar with the precautions required, and with requirements of the authority having jurisdiction.
13. Jobsite: Same as site.
14. Necessary: as determined in the professional judgement of the Owner Representative through the Owner's Consultant as being necessary for the Work, in conformance with the requirements of the Contract Documents, and excluding

matters regarding the means, methods, techniques, sequences and procedures of construction.
15. Noted: Same as indicated.
16. Owner-Furnished/Contractor-Installed (OFICI): Item, system or equipment furnished by Owner at its cost and installed by the Contractor as part of the Work.
17. Per: In accordance with or in compliance with.
18. Products: Materials, systems or equipment.
19. Project site: Same as site.
20. Proper: As determined by the Owner's Representative as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, which are solely the Contractor's responsibility to determine.
21. Provide: Means "furnish and install, complete and ready for use".
22. Regulation: Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, and rules, conventions and agreements within the construction industry

that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.

23. Required:
 - a. As required by regulatory requirements of governing authorities.
 - b. As required by referenced standards.
 - c. As required by existing job conditions.
 - d. As generally provided by accepted construction practices of the locale.
 - e. As indicated on the Drawings and in the Specifications.
 - f. As otherwise required by the Contract Documents.
24. Scheduled: Same as indicated.
25. Selected: As selected by Owner's Representative or Owner's Consultant from the full national product selection of the manufacturer, unless otherwise specifically limited in the Contract Documents to a particular quality, color, texture or price range.
26. Shown: Same as indicated.
27. Site: Same as Site of the Work or Project Site; the area or areas or spaces occupied by the Project and including adjacent areas and other related areas occupied or used by the Contractor for construction activities, either exclusively or with others performing other construction on the Project. The extent of the

Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.
28. Testing Laboratories: Same as Testing and Inspection Agency.
29. Testing and Inspection Agency: An independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.
30. Owner-Furnished/Contractor-Installed (OF CI): Same as Owner-Furnished/Contractor-Installed.

1.04 REFERENCE STANDARDS

- A. References: The Drawings and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests, and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual Sections of the Specifications.
- B. Relationship to Drawings and Specifications: Such references are incorporated into and made a part of the Drawings and Specifications to the extent applicable.
- C. Referenced grades, Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified in the Drawings or Specifications, provide the highest, best and greatest of the alternatives or options for the intended use and prevailing conditions.
- D. Copies of Reference Standards:
 - 1. Reference standards are not furnished with the Drawings and Specifications. It is the responsibility of the Contractor, subcontractors, manufacturers, suppliers, trades and crafts to be familiar with these generally recognized standards of the construction industry.
- E. Jobsite Copies:
 - 1. Contractor shall obtain and maintain at the Project site copies of reference standards identified on the Drawings and in the Specifications in order to properly execute the Work.
- F. Edition Date of References:
 - 1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of the Contract.
 - 2. All amendments, changes, errata, and supplements as of the effective date shall be included.
- G. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is the responsibility of the Contractor to be familiar with and have access to these nationally, and industry recognized specifications and standards.

1.05 ABBREVIATIONS & ACRONYMS

- A. Abbreviations and Names: Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable.
- B. Refer also to the "Encyclopedia of Associations", published by Gale Research Co., available in most libraries.
- C. The following are commonly used abbreviations which may be found on Contract Drawings and in Contract Specifications:

AA	Aluminum Association
AAA	American Arbitration Association
AAC	Architectural Anodizers Council
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ACPA	American Concrete Pumping Association
ADA	Americans with Disabilities Act
ADC	Air Diffusion Council
AFSA	American Fire Sprinkler Association
AGA	American Galvanizers Association (formerly AHDGA)
AGA	American Gas Association
AGC	Associated General Contractors of American
AI	Asphalt Institute
AIA	American Institute of Architects
AIMA	Acoustical and Insulation Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association International
ANSI	American National Standards Institute
APA	Engineered Wood Association (formerly American Plywood Association)
APWA	American Public Works Association
ARMA	Asphalt Roofing Manufacturers Association
ASAC	American Subcontractors Association of America
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASPE	American Society of Plumbing Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BOC	Board of Corrections
CABO	Council of American Building Officials
CAC	California Administrative Code (see California Code of Regulations (CCR))
CAL/OSHA	State of California Construction Safety Orders
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Electrical Code
CFC	California Fire Code
CFR	Code of Federal Regulations
CIMA	Construction Industry Manufacturers Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers' Institute
CMC	California Mechanical Code
CPC	California Plumbing Code
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
CTIOA	Ceramic Tile Institute of America, Inc.
DHI	Door and Hardware Institute
DSA	Division of the State Architect
EJMA	Expansion Joint Manufacturers Association
FGMA	Flat Glass Marketing Association
FM	Factory Mutual Research Organization
FS	Federal Specification (from GSA)
GA	Gypsum Association
GSA	General Services Administration
HCAI	Department of Health Care Access and Information (State of California)
IAPMO	International Association of Plumbing and Mechanical Officials
IEEE	Institute of Electrical and Electronics Engineers, Inc.
ISO	International Organization for Standardization

MIA	Masonry Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MM	State of California, Business and Transportation Agency, Department of Transportation, "Materials Manual"
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NEC	National Electrical Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NFSA	National Fire Sprinkler Association
NGA	National Glass Association
NIBS	National Institute of Building Sciences
NIST	National Institute of Standards and Technology
NPCA	National Precast Concrete Association
NRCA	National Roofing Contractors Association
NSC	National Safety Council
NSF	National Sanitation Foundation
NSPE	National Society of Professional Engineers
NTMA	National Terrazzo and Mosaic Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing and Drainage Institute
PS	Product Standard (U.S. Department of Commerce)
RIS	Redwood Inspection Service
SDI	Steel Deck Institute
SFM	State Fire Marshal (California)
SFPE	Society of Fire Protection Engineers
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Society for Protective Coatings (Steel Structure Painting Council)
SSPWC	Standard Specifications for Public Works Construction
SWRI	Sealant, Waterproofing and Restoration Institute
TCA	Tile Council of America
TJC	The Joint Commission
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USS	United States Standard
WCLIB	West Coast Lumber Inspection Bureau
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

- D. Words and terms not otherwise specifically defined in this Section or in the Contract Documents, shall be as customarily defined by trade or industry practice, by reference standard and by specialty dictionaries such as Dictionary of Architecture and Construction (Cyril M. Harris, McGraw-Hill Educational; 4th Edition, September 5, 2005). E. Additional abbreviations, used on the Drawings, are listed thereon.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 42 00

SECTION 01 45 00

QUALITY CONTROL

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Contractor's Quality Control
- B. Quality of the Work
- C. Inspections and tests by governing authorities
- D. Inspections and tests by serving utilities
- E. Inspections and tests by manufacturer's representatives
- F. Inspections and Independent testing and Inspection Laboratories/Agencies
- G. Contractor's responsibilities in inspections and tests
- H. Contractor's responsibilities regarding the Owner's testing laboratory
- I. Test reports
- J. Geotechnical engineer

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 014100 – REGULATORY REQUIREMENTS: Compliance with applicable codes, ordinances and standards.
- C. Section 014550 – INSPECTION and TESTING of WORK
- D. Section 016100 – PRODUCT REQUIREMENTS: Product Options, substitutions, transportation and handling requirements, storage and protection requirements, and system completeness requirements.

1.03 CONTRACTOR'S QUALITY CONTROL

- A. Contractor's Quality Control: Contractor shall ensure that products, services, workmanship and site conditions comply with requirements of the Contract Documents by coordinating, supervising, testing and inspecting the Work and by utilizing only suitably qualified personnel.
- B. Quality Requirements: Work shall be accomplished in accordance with quality requirements of the Contract Documents, including, by reference, all Codes, laws, regulations and standards. When no quality basis is prescribed, the quality shall be in accordance with the best-accepted practices of the construction industry for the locale of the Project, for projects of this type.

- C. Quality Control Personnel: Contractor shall employ and assign knowledgeable and skilled personnel as required by contract or necessary if not prescribed to perform quality control functions to ensure the Work is provided as required.

1.04 QUALITY OF THE WORK

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.
- B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements and adjacent construction.
- C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling and staining, until Acceptance by Owner.
- D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report (ICC) requirements in preparing, fabricating, erecting, installing, applying, connecting and finishing Work.
- E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviation is acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by Owner's Representative and Owner's Consultant in accordance with provisions of the General Conditions of the Contract.
 - 1. Contractor shall cooperate by making Work available for inspection by Owner's Representative, Owner's Consultant or their designated representatives.
 - 2. Such verification may include mill, plant, shop, or field inspection as required.
 - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured, fabricated or stored.
 - 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by Owner's Representative or Owner's Consultant.
 - 5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the General Conditions of the Contract.
- G. Observations by Owner's Consultants: Periodic and occasional observations of the Work in progress will be made by Owner's Consultant and their consultants as deemed necessary to review progress of Work and general conformance with design intent.
- H. Limitations on Inspections, Tests and Observations: Neither employment of independent testing and inspection agencies nor observations by Owner's Consultant and their consultants shall relieve

Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents.

- I. Acceptance and Rejection of Work: Owner's Representative reserves the right to reject all Work not in conformance to the requirements of the Contract Documents.
 - 1. If initial tests or inspections made by Owner's Testing Laboratory or Geotechnical Engineer reveal any portion of the Work fails to comply with Contract Documents, or if it is determined that any portion of Work requires additional testing or inspection, additional tests and inspections shall be made as directed by Owner's Representative.
 - 2. If such additional tests or inspections establish such portions of the Work comply with Contract Documents, all costs of such additional testing or inspection will be paid by Owner.
 - 3. If such additional tests or inspections establish such portions of the Work fail to comply with Contract Documents, all costs of such additional tests and inspection shall be deducted from the Contract sum.
- J. Correction of Non-conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by Contractor at no change in the Contract Sum or Contract time.
- K. Acceptance of Non-Conforming Work: Acceptance of non-conforming Work, without specific written acknowledgement and approval of Owner shall not relieve Contractor of the obligation to correct such Work.
- L. Contract Adjustment for Non-conforming Work: Should Owner or Owner's Consultants determine it is not feasible or in Owner's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between Owner and Contractor. If equitable reduction in Contract Sum cannot be agreed upon, a Directed Change Order will be issued and the amount in dispute resolved in accordance with applicable provisions of the General Conditions of the Contract.

1.05 INSPECTIONS AND TESTS BY GOVERNING AUTHORITIES

- A. Regulatory Requirements for Testing and Inspection: Comply with California Building Code (CBC) requirements and all other requirements of governing authorities having jurisdiction.
- B. Inspections and tests by governing Authorities: Contractor shall cause all tests and inspections required by governing authorities having jurisdiction to be made for Work under this Contract.
 - 1. Such authorities include Owner's Building Inspection (code compliance), Fire Marshal's office and similar agencies.

1.06 INSPECTIONS AND TESTS BY SERVING UTILITIES

- A. Inspections and Tests by Serving Utilities: Contractor shall cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

1.07 INSPECTIONS AND TEST BY MANUFACTURER'S REPRESENTATIVES

- A. Inspections and Tests by Manufacturer's Representatives: Contractor shall cause all tests and inspections specified to be conducted by materials or systems manufacturers, to be made. Additionally, all tests and inspections required by materials or systems manufacturers as condition of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum. Manufacturer's Representatives shall provide a PDF electronic report indicating but not limited to work or materials that are missing, not installed correctly, damaged or need correction. Manufacturer's Representatives shall issue a final PDF electronic report once all work and materials are installed correctly, functioning and in compliance with the Manufacturer's Warranty.

1.08 INSPECTION BY INDEPENDENT TESTING AND INSPECTION LABORATORIES A.

Definitions:

1. The term "Owner's Testing Laboratory" means a testing laboratory retained and paid for by Owner for the purpose of reviewing material and product reports, performing material and product testing and inspection, and other services as determined by Owner.
- B. Owner will select an independent testing and inspection laboratory or agency to conduct tests and inspections as called for in the Contract Documents and as required by governing authorities having jurisdiction.
1. Responsibility for payment for tests and inspection shall be as indicated in the schedule below. All time and costs for Contractor's services related to such tests and inspections shall be included in Contract Time and Contract Sum.
- C. Contractor shall notify Owner, and if directed by Owner's Representative testing and inspection laboratory, when Work is ready for specified tests and inspections.
- D. Contractor shall pay for all additional charges by testing and inspection agencies and governing authorities having jurisdiction due to the following:
1. Contractor's failure to properly schedule or notify testing and inspection agency or authority having jurisdiction.
 2. Changes in sources, lots or suppliers of products after original tests or inspections.
 3. Changes in means, methods, techniques, sequences and procedures of construction that necessitate additional testing, inspection and related services.
- E. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design. Test and inspections shall include, but not be limited to, the following:

List the applicable services required, for example:

Material Inspections and Tests		Paid by:
Concrete Reinforcement	Reinforcement Inspection	Owner
	Reinforcement Strength	Owner
Cast in Place	Slump Tests	Owner
	Compressive Strength Tests	Owner
Structural Steel	Welding Inspection	Owner
	High Strength Bolting Inspection	Owner

- F. Test and Inspection Reports: After each inspection and test, one (1) PDF electronic report shall be promptly submitted to Owner's Representative, Contractor and to agency having jurisdiction (if required by code).

1. Reports shall clearly identify the following:
 - a. Date issued
 - b. Project name and Project number
 - c. Identification of product and Specification Section in which Work is specified
 - d. Name of inspector
 - e. Date and time of sampling or inspection was conducted
 - f. Location in Project where sampling or inspection was conducted
 - g. Type of inspection or test
 - h. Date of tests
 - i. Results of tests
 - j. Comments concerning conformance with Contract Documents and other requirements
2. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
3. Samples taken but not tested shall be reported.
4. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
5. When requested, testing and inspection agency shall provide interpretations of test results.
6. Verification reports shall be prepared and submitted, stating tests and inspections specified or otherwise required for Project, have been completed and material and workmanship comply with the Contract Documents. Verification reports shall be submitted at intervals not exceeding six (6) months, at Substantial Completion of the Project, and at all times when Work of Project is suspended.

1.09 CONTRACTOR RESPONSIBILITIES IN INSPECTIONS AND TESTS

- A. Tests, inspections and acceptances of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Except as otherwise provided, Contractor shall notify Owner's Representative to make arrangements for such tests, inspections and acceptances. Contractor shall give Owner's Representative timely notice of all required inspections as outlined in Specification Section 014550 – INSPECTION and TESTING of WORK, Item 1.05, Scheduling Inspections – Notification Requirements.

- B. If such procedures for testing, inspection or acceptance reveal failure of any portion of the Work to comply with requirements of the Contract Documents, Contractor shall bear all costs made necessary by such failure including those of repeated procedures, including compensation for Owner's Consultant's services and expenses.
- C. If Owner and/or Owner's Consultants are to observe tests, inspections or make acceptances required by the Contract Documents, Owner and/or Owner's Consultant will do so promptly and, where practicable, at the normal place of testing.
- D. Cooperate with testing and inspection agency personnel, Owner, Owner's Consultant's and their consultants. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.
- E. Provide incidental labor and facilities to provide safe access to Work to be tested and inspected, to obtain and handle samples at the Project site or at source of products to be tested, and to store and cure test samples.

1.10 CONTRACTOR RESPONSIBILITIES REGARDING OWNER TESTING LABORATORY

- A. Secure and deliver to Owner's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.
- B. Submit to Owner's Representative the preliminary design mixes proposed for concrete and other materials, which require review, by Owner's Consultants and/or Owner's Testing Laboratory.
- C. Submit copies of product test reports as specified.

1.11 TEST REPORTS

- A. Owner's Testing Laboratory shall submit one (1) PDF electronic copy of all reports to the Owner's Representative, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

1.12 Owner will distribute one (1) PDF electronic copy of the reports to Owner's Consultants and Contractor.
GEOTECHNICAL ENGINEER

- A. Owner will retain and pay the expense of a Geotechnical Engineer to perform inspection, testing and observation functions specified by Owner. Geotechnical Engineer will communicate only with Owner. Owner's Representative shall then give notice to Contractor, of any action required of Contractor.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 45 00

SECTION 01 45 50

INSPECTION AND TESTING OF WORK

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Project Inspections and Procedures
- B. Scheduling Inspectors – Notification requirements

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013500 – SPECIAL PROCEDURES
- D. Section 014100 – REGULATORY REQUIREMENTS
- E. Section 014500 – QUALITY CONTROL

1.03 DEFINITIONS

- A. IOR: Inspector-of-Record
- B. FM: Fire Marshal
- C. TL: Testing Laboratory

1.04 PROJECT INSPECTIONS AND TESTING PROCEDURES

- A. Inspections: The following inspections will be requested on this project, as appropriate. Also see Part 3 for additional inspection items or Part 3
 - 1. Inspections required by the California Building Code
 - 2. Inspections listed on the Testing, Inspection and Observation (TIO) form
 - 3. Final inspections
- B. Procedures: Owner's Representative shall be the Contractor's contact for all inspection requests. Contractor shall fill out Inspection Request Form for all inspections.
 - 1. Contractor shall properly plan and coordinate inspection requests. Schedule delays caused by Contractor's failure to plan and/or coordinate inspection requests will not be considered for adjustments to Contract Time or Contract Sum.
 - 2. A complete set of stamped and approved Contract Drawings and Contract Specifications, including applicable shop drawings and building permit shall be available on site for review

by the Inspector-of-Record. The Contractor, Subcontractors and other responsible parties shall be present during inspection walkthroughs. All areas of project scope shall be ready and accessible for inspection. Contractor shall provide access equipment as applicable for the inspector's needs.

3. A complete set of codes referred to in the approved plans must be maintained on the job at all times.
4. Contractor shall submit verified compliance reports as outlined in the California Administrative Code, Section 7-151.

1.05 SCHEDULING INSPECTIONS –NOTIFICATION REQUIREMENTS

- A. Advance Inspection Notification: Owner's Representative for this project requires the following advance notifications to schedule appropriate inspection agencies at the project site.
 1. IOR Inspection Request Notification: Twenty-four (24) hours. Note: Inspection requests received by 2:00 PM will be scheduled for next day inspection. Inspection requests received after 2:00 PM will be scheduled for the following day; (example: Inspection request received at 2:01 PM on a Monday would be scheduled for inspection on Wednesday). Weekend and off-hours inspection requests will be scheduled on a case-by-case basis with a minimum of seventy-two (72) hour inspection request notification.
 2. Testing Laboratory Inspections: Forty-eight (48) hours.
 - a. All testing laboratory and testing procedures must be scheduled by Owner's Representative. Inspections and/or testing directly scheduled by Contractor will not be accepted.
 - b. Contractor will bear all costs associated with unauthorized inspections and testing.
 3. Fire Marshal Inspection Request Notification: Seventy-two (72) hours.
- B. Methods of Inspection Notification:
 1. All inspection notifications shall be in writing using inspection forms located at back of this Section. Incomplete forms will be returned as non-compliant, and no inspection will be scheduled until all required inspection information is provided.
 2. Emailed inspection requests will be accepted. Owner's Representative email address is Joseph.Cooper@lakecountycal.gov Notification time begins from the date and stamp of the email, provided it is sent during normal business hours. Emailed inspection requests sent after normal business hours and/or received on non-normal workdays, as defined in Specification Section 013100 – COORDINATION, paragraph 1.07.F.4.A will begin notification time starting at 7:00 AM the following normal business day.
- C. Off-hours Inspection Requests: Contractor shall provide time windows for all off-hour or other than normal work hour inspections. Owner's Representative shall have final authority in setting times of off-hour inspections.
- D. Re-inspections:

1. More than two (2) re-inspections: The cost of re-inspections of the same work, more than twice, shall be deducted from Contract Sum. Owner will provide itemized invoice for Contractor's records.
2. Work unprepared for inspection: Re-inspections of the same work scheduled by Contractor, but not ready for inspection will be identified as a re-inspection.

PART II - PRODUCTS – Not Applicable to this Section.

PART III - EXECUTION

Note: Part 3 describes typical inspection requirements for each individual inspector's jurisdiction for non-HCAI projects. Part 3 is provided as a reference source for Contractor's use and Scheduling, as applicable. Part 3 is not intended to be all-inclusive and Contractor shall verify actual inspection requirements needed for this project. FIRE DAMPERS (Title 24, Part 2, Chapter 43) Note: Manufacturer's installation instructions shall be used for inspections and testing. A. 1 Hour: IOR test 100%. Fire Marshal tests 100% or as needed.

B. 2 Hour: IOR tests 100%. Fire Marshal tests 100%.

C. Smoke: IOR tests 100%. Fire Marshal tests 100%.

3.02 FIRE SPRINKLERS (Title 24, Part 2, Volume 1, Chapter 9; NFPA Bulletin 13) A.

Approved drawings shall be on jobsite from start to completion of project.

B. Underground pressure test @ 200 psi.

C. Fire Marshal to witness installation of underground lines.

D. Fire Marshal to witness underground flush prior to connection.

E. Hydro-test above ground piping @ 200 psi for two (2) hours.

F. Inspection of hangers, bracing, and seismic joint crossing(s).

G. Flow alarm test, tamper switch test.

H. Fire pump test.

I. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).

J. Final inspection: signs in place, labeling, fire extinguishing system flow alarm test.

3.03 FIRE ALARM SYSTEM (Title 24; Part 9, Article 1006)

Note: Fire Sprinkler and Fire Alarm systems tests shall be performed in presence of Fire Marshal. A.

Approved drawings shall be on jobsite from start to completion of project.

B. Verify Emergency Power source.

- C. Activate all initiating devices.
 - D. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).
 - E. Complete test of system per Title 24, Part 9, CFC, Article 1003.3.4.1).
- 3.04 MEANS OF EGRESS (Title 24, Part 2, Volume 1, Chapters 10)
- A. Exit sign/light locations and connected to two (2) sources of power.
 - B. Normal Power.
 - C. Emergency Electrical System, Life Safety Branch.
 - D. Construction - floors, walls, ceilings, penetrations per listings.
 - E. Electrical boxes - no back to back, 24 inches horizontal separation (Section 709).
 - F. Electrical boxes - 100+ square inches to be wrapped/protected.
 - G. Flame Spread, Fuel Contribution and Smoke Density for finishes (Chapter 8).
- 3.05 EMERGENCY LIGHTING
- A. Generator Test (Title 24, Part 3, Section 700-4; Section 701-5).
 - B. Emergency lights - locations (Title 24, Part 2, Volume 1, Chapter 10, Section 1003.2.8.5).
- 3.06 MECHANICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 4) A.
- Mechanical Equipment Requirements
- 1. Access to Equipment (Section 305, 405, 606.5, 815, 2.2.8, 903, 910.8, 1106.3).
 - 2. Labeling of Equipment (Section 307).
 - 3. Identification of Equipment - Area or Space Served (Section 304.5).
- B. Mechanical Testing
- 1. Air balance completed and reviewed by Mechanical Engineer-of-Record.
 - 2. Hydronic balance completed and reviewed by Mechanical Engineer-of-Record.
 - 3. Air and Hydronic reports forwarded to Mechanical Engineer of Record.
 - 4. Fuel Gas line inspection (Part 4, Section 1406 and Appendix B, Chapter 16).
- C. Boilers
- 1. Boiler – Operating Adjustments and Instructions (Section 1022).
 - 2. Boiler – Inspections and Tests (Section 1023).

3. Boiler – Clearances/Permits (Section 1005.0).

D. Ducts

1. Installation - Bracing (Part 4, Section 604.1.4)
2. Fire Damper test log from IOR (Part 4, Section 606.2).
3. Fire Damper test by Fire Marshal (Part 4, Chapter 6, Section 606.2).
4. Smoke Damper and Detector test log from IOR (Including Duct Detector tests).
5. Smoke Damper and Detector by Fire Marshal.

E. HVAC Unit Testing

1. Verify correct filter types and efficiencies.
2. Motor Rotation.
3. Condensate drain tests (Section 310).
4. Equipment shut down by smoke detectors (duct or space).

3.07 PLUMBING CHECKLIST FOR CLOSE-OUT (Title 24; Part 2, Chapter 29; Part 5)

A. Piping Systems (Title 24, Part 5)

1. Domestic Water Line Sterilization Test (Title 24, Part 2, Section 609.9; Title 22, Division 4, Chapter 16, Article 5).
2. Domestic Water System (hot, cold) Pressure test (Title 24, Part 5, 609.4).
3. Natural Gas Pressure Test (Title 24, part 5, Chapter 12, Section 1204).
4. Vent & Waste System Pressure test (Title 24, Part 5, 712.0).
5. Hydronic Water Pressure test (Title 24, Part 4 1201.2.8).

B. Water Heater Testing

1. Water Heater Temperature Test (Domestic).

3.08 ELECTRICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 3, and Part 1, Chapter 7, Section 7- 141, 7-149)

A. Main Panel/Service

1. Identification and Labeling of Equipment (110-21, 110-22, 230-70).
2. Grounding test and Certification (250, 250-56).
3. Ground fault interrupt test adjustment and certification [230-95(c); 517-17(c)].
4. Emergency power transfer switch test (700-4).

5. Panel load balance.

B. Emergency Power and Standby Systems (Article 700 & 701) [Test Logs from IOR]

1. Emergency Generator testing and certification (701-5).
2. Identification and Labeling of equipment (110-21, 110-22, 517-22).
3. Lighting and Lighting Levels (517-22).
4. Receptacles (410L, 517-13, 517-18, 517-19).
5. Exiting signs and lights [517-32(b), 517-42(b)].
6. Fire Alarm (760).

C. General Electrical Requirements

1. Working space/Headroom [Table 110-26(a); 110-33; 110-34].
2. Circuits and lights tested (410-45).
3. Receptacle polarity and grounding [200-10(b)].
4. Isolated ground monitor test [517-160(b)].
5. Motor load current adjustment.
6. Identification and Labeling of equipment (110-21; 110-22).
7. Identify circuits (517-19).

D. Miscellaneous Electrical Requirements

1. Test logs from Contractor and Inspector-of-Record.
2. Electrical Engineer-of-Record acceptance of system.
3. Owner In-Service training on Equipment.
4. Equipment Manuals and Instruction to Owner.
5. Warranties and Equipment Certification.
6. As-Built documents to Owner.

3.09 FIRE MARSHAL INSPECTION REQUIREMENTS A.

Framing Inspections

1. Structural members in fire-resistive construction.
2. Check fireproofing per approved design tested assembly description.

B. Fire-Rated Partition Locations

1. Check for stud and nailing/screwing spacing per approved design tested assembly description.
2. Check for fire blocking in combustible construction.
3. Check for rated door/window frame installation (manufacturer's installation instructions shall be available for review).
4. Check for electrical installation, for example, number and size of electrical boxes, panels, cabinets, etc.
5. Check hangers, seismic bracing for sprinkler piping installation, if applicable (this would be checked during overload pressure test inspection phase of sprinkler system).

C. Close-In

Inspections

1. Check fire-blocking and draft stops in combustible construction.
2. Check gypsum board installation in accordance with approved design assembly description for rated assembly.
3. Check integrity of firewall construction where recessed cabinets, panels, excessive electrical/plumbing are installed.

4. Check fire damper installation (manufacturer's installation instructions shall be available for review). Fire Marshal will witness actuation of minimum 10% fire dampers installed and 100% in 2 hour or greater fire rated wall assemblies.
5. Check for through-penetrations and fire-stop systems in all walls or floor/ceiling assemblies.
 - a. Check top of wall to structure fire stopping.
6. Check above ceiling areas and construction prior to installation of ceilings.
 - b. Check access and serviceability for above ceiling to included but not limited to valves, mechanical equipment, electrical equipment and other components that require adjustment, access or service.
 - c. Contractor shall move any items including but not limited to conduit, piping, braces and other obstructions that block access to equipment and components needing adjustment, access or service.
 - d. Check bracing, anchorage, fasteners and installation.

D. Final Construction Inspections

1. Final project walk-through: Example, Emergency lighting will be tested to verify exit illumination of both interior and exterior, while generator (if applicable) is tested at same time.

3.10 Refer to the following attachment.

- A. Inspection Request
- B. Non-conforming Work Notice

END OF SECTION 01 45 50

INSPECTION REQUEST

Project

[Contractor] [Design-

#: Inspection #: IR #: _____
ProjectBuilder] IR Date:
#: _____Spec Section
(s):

Name: _____

To: LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

Project Manager

Joseph Cooper

Email: Joseph.Cooper@lakecountycal.gov

P:

E-mail:

Drawing Ref.: _____

Detail: _____

Shop Drawing:

Project Schedule Activity ID No.: _____ Date of Inspection: _____

Time Requested:

Type of Inspection: _____

Location of Inspection (i.e., Floor, Column Line,
etc.): _____

*Re-inspection Requested for Previous IR #: _____

All work Requested for Inspection has been reviewed for compliance with the contract documents by [Contractor][Design- Builder]'s
Superintendent prior to notification of Inspection Request.

Signed: _____ Date: _____

OWNER USE ONLY

Date Received: _____ Time of Inspection: _____

Date of Inspection: _____ Inspector: _____ ☐ Inspection Report Attached

Inspector Arrival Time: _____ Inspector Departure Time: _____

Comments:

☐Approved
☐Approved as Noted
☐Not Approved
☐Cancelled

Inspection Request Notes or Description of Items of Deficiency if needed below (Part 1, Chapter 7, Section 7-145, item 6)

Project Field Record of Construction Progress Summary of Work in Progress (Part 1, Chapter 7, Section 7-145, item 6)	
Project Phase (Building Foundation, Structural, Wall Framing, Electrical Rough-In, Sprinkler Rough-In, etc.)	
Project Phase Percentage Complete (% of the phase completed):	Overall Project Percentage Complete:

NON-CONFORMING WORK NOTICE

PROJECT NAME:

JOB #:

Notice #:

Date:

To: [PROJECT MANAGER NAME/EMAIL]	From: IOR
[DESIGN PROFESSIONAL NAME/EMAIL]	
[PROJECT #, AREA COMPLIANCE OFFICER/EMAIL]	

Spec Section Ref.:

Paragraph: _____

Drawing Ref.: _____

Detail: _____

In accordance with Article 12 of the General Conditions, the following defective condition(s) has/have become apparent:

Reported by:

CORRECTIVE ACTION SHOULD BE TAKEN AS SOON AS POSSIBLE AND COMMENCE NO LATER THAN TEN (10) CALENDAR DAYS AFTER THIS NOTICE. COORDINATE THE VERIFICATION OF THE CORRECTIVE ACTIONS WITH THE INSPECTOR OF RECORD. IF FURTHER INFORMATION IS

NEEDED, ADVICE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH THE GENERAL CONDITIONS.

Description of corrective action taken: ____

Accepted by: _____ Date: _____

CC:

SECTION 01 51 00

TEMPORARY UTILITIES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Temporary Power and Lighting.
- B. Temporary Heating, Cooling & Ventilation.
- C. Temporary Water.
- D. Temporary Fire Protection.
- E. Temporary Telephone, Data, and WIFI.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and controls, to accommodate the Owner's occupancy and use of the areas and spaces adjacent to construction.
- C. Section 017400 – CLEANING
- D. Section 017700 – CLOSEOUT PROCEDURES

1.03 TEMPORARY UTILITIES

- A. Temporary Connections: Temporary power, water, sewer, gas and other utility services necessary for the Work may be made to existing building systems. Connections shall be subject to Owner's review and written approval. Coordinate with utility companies and Owner's Plant Operations & Maintenance Department for locations and methods of connections.
- B. Contractor shall provide and pay for installation, operation, maintenance, and removal of all utilities. The services will be provided at the current rates for each utility.

1.04 TEMPORARY POWER AND LIGHTING A.

Service Requirements:

- 1. Temporary Electrical Service: Contractor shall provide and pay for installation, operation, maintenance, and removal of temporary electrical service, lighting devices and restoration of existing and permanent equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California. Use of Owner's electrical power and lighting system is prohibited without Owner's written approval and will be considered only when an alternate electrical power source is unavailable.

- a. Install initial services at time of site mobilization.

- b. Modify and extend systems as Work requires.
 - c. Maintain electrical system to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
 - d. Restore existing and permanent lighting used during construction to original condition. Replace defective fixtures, bulbs, and other component parts.
 - e. Clean existing and permanent lighting fixtures used during construction per Section 017400 – CLEANING.
 - 2. Distribution: Contractor shall provide distribution network for temporary electrical power.
 - 3. Power Source: Arrange for service with Owner's Plant Operations and Maintenance Department, or local utility company.
 - 4. Conformance: All temporary wiring and electrical facilities shall be in accordance with applicable provisions of Electrical Safety Orders of the State of California.
 - 5. Temporary Lighting: Construction lighting shall be supplied and maintained by Contractor at Contractor's expense. Sufficient lighting levels shall be provided to allow construction to be properly and safely performed. Contractor shall give special attention to adequate lighting for stairs, ladders, floor openings, basements and similar spaces. Promptly replace burnt out, worn or defective parts.
 - 6. Lighting fixtures: Locate fixtures in areas of Work: One (1) lamped fixture in rooms, except closets and utility chases; one (1) lamped fixture for every 750 square feet in large areas.
 - 7. Security Lighting: Contractor shall provide security lighting during hours of low visibility.
- B. Distribution requirements:
- 1. Weatherproof distribution boxes with one (1) - 240-volt, three (3) phase power outlet and four (4) – 120-volt outlets consisting of 100 amperes fused switches with equipment ground, spaced so a 100-foot extension cord will reach all areas of building.
 - 2. Wiring, connections and protection for temporary lighting.
 - 3. Wiring connections and protection for temporary and permanent equipment, for environmental control, for temporary use of electricity operated equipment, and for testing.
- C. Use of Owner System: If alternate electrical power and lighting sources are unavailable, Owner may permit Contractor to use existing, in-place electrical system. Owner does not guarantee availability of electrical power or adequate lighting levels through use of existing system. If power and lighting is insufficient or not available Contractor shall provide secondary source (i.e., generator) as approved by Owner.

1. It is expressly understood and agreed by Contractor that Owner existing power and lighting system's primary obligation is servicing patient care. The Owner system is not designed for purposes of construction activities.
2. Contractor should expect power and lighting interruptions during course of Work. Contractor will be required to cease use of Owner electrical-power and lighting systems, as required by the needs of Owner.
3. When use of Owner electrical system is approved in writing, Contractor is required to adhere to Owner's electrical lockout procedures. See Division 26– Electrical or Campus Design Guidelines.
 - a. Provide and maintain warning labels on energized equipment.
 - b. Replace plates, electrical devices or similar existing items or components damaged as a result of temporary usage.

1.05 TEMPORARY HEATING, COOLING AND VENTILATING A.

Service Requirements:

1. Contractor shall provide temporary heat as necessary for proper installation of all work and to protect all work and materials against injury from dampness and cold and to dry out building. Fuel, equipment and method shall be approved in writing by Owner's Representative.
2. Install initial services at time of site mobilization. Modify and extend systems as Work requires.
3. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
4. Use of permanent heating system is preferred to any other system for maintaining temperature of building during installation of finish materials, but such use will not be permitted before clean-up after plastering and/or drywall work has been completed. Contractor shall make every effort to complete permanent heating system in time for such use. Permanent fans shall not be used before filters are installed. Filters shall be cleaned and serviced by Contractor just prior to final acceptance.
 - a. Vent portable units to building exterior, complete with automatic controls. Direct-fired units are not allowed. Locate units and outlets to provide uniform distribution of heating, cooling and ventilating.
 - b. Operate and maintain existing equipment being used; clean or replace filters and install filters in duct extensions as necessary to maintain occupied areas, work areas and finished areas, in specified condition.
 - c. Prior to operation of permanent equipment, verify controls and safety devices are complete, equipment has been tested, and inspection made and approved for operation.

- d. Remove temporary materials and equipment when permanent system is operational. Restore existing and permanent systems used for temporary purposes to original condition.
- e. Install temporary filters in air handling units and ducts, replace as necessary to prevent dust in equipment and ducts, to avoid contaminants in Work or finished areas. After completion, replace temporary filters with new, clean, reusable filters.
- 5. Maintain temperature, humidity, and ventilation in enclosed areas to provide ambient conditions for storage, preparation and Work; to cure installed materials, to prevent condensation, to dry floor surfaces and to prevent accumulations of dust, fumes and gases.
- 6. During non-working hours maintain temperature in enclosed areas occupied solely by Contractor at a minimum of 50°F., or higher as specified in individual Sections and by individual product suppliers and manufacturers. Areas occupied in whole or in part by Owner are to be maintained at normal temperatures.

B. Utility Sources:

- 1. Electrical: As specified above in Item 1.04.
- 2. Existing mechanical systems may be used for temporary purposes. Coordinate use with Owner for conditions to be maintained in adjacent Owner occupied areas.
- 3. Contractor shall provide and pay for all installation, operation, maintenance, and removal of equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California.

1.06 TEMPORARY WATER

A. Service Requirements:

- 1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner's systems when temporary service is connected.
- 2. Water service, if necessary for construction, can be made available at no expense to the Contractor provided the water is not wasted. Contractor shall be responsible for distribution of water to points of use.
- 3. Certified reduced pressure type back-flow prevention device as submitted to and approved by Owner shall be installed before water is obtained from an Owner facility fire hydrant or interior building connection.

B. Plumbing: Maintain system to provide continuous service with adequate pressure to outlets, including Owner system when temporary service is connected. See also Division 1 Approvals.

- 1. Size piping to supply construction needs, temporary fire protection, and for Owner's needs when existing service is connected.
- 2. Disinfect piping used for drinking water. See Division 33 and 22 for requirements or Campus Design Guidelines

3. Source: Owner existing service, connect at locations as directed by Owner.
 4. Provide valved outlets to control water pressure adequately for hoses.
 5. Fire hydrants used for water supply for construction – Contractor must use only ¾” square hydrant wrench on square operating nut and must use only pentagon wrench on pentagon operating nut. This is to prevent damage to the hydrant operating nut. Any damage caused by the use of an improper wrench or other misuse of the hydrant must be repaired at contractor expense. Contractor must inspect hydrant prior to use and make the Owner aware of any pre-existing damage.
- C. Use of Existing System: Existing system may be used for temporary water. Monitor usage to prevent interference with Owner's normal operational requirements.
 - D. Use of Permanent System: Contractor shall obtain written agreement from Owner establishing start of warranty period and conditions of use.
 - E. Contractor shall pay for installation, operation maintenance and removal of system and restoration of existing and permanent equipment. Owner will pay costs of water consumed for normal construction operations. Contractor shall take measures to conserve usage.

1.07 TEMPORARY FIRE PROTECTION A.

Requirements:

1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
2. Provide and maintain fire protection equipment including extinguishers, fire hoses and other equipment as necessary for proper fire protection during course of the Work.
3. Use fire protection equipment only for fighting fires.
4. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings and throughout construction site. In area under construction, provide at least one (1) fire extinguisher for each 5,000 square feet of building floor area. Locate fire extinguishers so that a person never has to walk more than seventy-five (75) feet to obtain one.
5. Assign qualified person with authority to maintain fire protection equipment, institute fire prevention measures, and direct prompt removal of combustible and waste material. Submit ILSM requirements per Specification SECTION 013500 – SPECIAL PROCEDURES.

1.08 TEMPORARY TELEPHONE, DATA, INTERNET, and WIFI A. Service

Requirements:

1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
2. Contractor shall select from the following options:

- a. Owner shall provide conduit, cabling and dial tone to Contractor's location(s). Contractor shall pay Owner for cable, conduit installation and later removal of same and also pay Owner a monthly fee for use of Owner telephone, data internet, and WIFI system.
 - b. Owner shall provide conduit and cabling to Contractor's location(s). Contractor shall receive dial tone from local utility. Contractor shall pay Owner for cabling, conduit installation, maintenance of same and later removal of same. Contractor shall pay local utility for monthly telephone, data, internet and WIFI service.
 3. Contractor shall select number of lines, instruments and other features.
 4. Contractor shall prepare and submit to Owner an itemized request for telephone lines (according to option 2a or 2b above) and internet service. Project Manager will submit a service request to the IT department.
- B. Use of Existing System: Existing Owner telephone system shall not be used for temporary telephone service.
- C. Contractor Phone:
1. Contractor shall have telephone emergency number or other facility available at Contractor's business office for duration of contract where contractor and superintendent may be contacted within twenty-four (24) hours. Provide emergency numbers to Owner.
- D. Telephones:
1. Contractor shall use, and only permit to be used, FCC approved communication devices on frequencies approved by FCC and Owner.
 2. Contractor shall not use, or permit to be used, communication devices which interfere with existing Owner communication systems, including, but not limited to:
 - a. Life Flight or CHP helicopters.
 - b. Emergency Service vehicle communications.
 - c. Microwave transmission stations.
 - d. Cellular or other mobile phone systems.
- E. Temporary Internet Service: Provide a high-speed internet connection (Min. 20 Mbps download, 10 Mbps upload) to Contractor's field offices. The Contractor's field office shall be capable of sending and receiving e-mail and be able access the Internet.
1. WIFI coverage at the above internet speeds will be provided throughout the jobsite.

PART II - PRODUCTS

2.01 MATERIALS

- A. May be new or used, adequate to the purpose.
- B. Devices and Equipment: Standard devices, meeting UL requirements.
- C. Telephones: may be product of local service company or specialty devices compatible with service company requirements.
- D. Modems compatible with internet service.

PART III - EXECUTION

3.01 INTERRUPTION OF EXISTING SERVICES

- A. No existing utility services shall be interrupted at any time without prior written approval from the Owner. Required shutdowns shall be scheduled a minimum of fourteen calendar days prior to actual shutdown. The operation of valves, switches, etc. will be performed and paid for by Owner.
 - 1. Prior to the outage, all possible Work shall have been completed which will minimize the length of the required outage. During the outage, the Work will be prosecuted with diligence by an adequate number of skilled personnel.
 - 2. Provide and pay for all personnel required by the Owner to maintain safe conditions during the outage including but not limited to fire watch, safety monitors and/or traffic control. Coordinate Work with Owner's Representative.

3.02 REMOVAL OF TEMPORARY CONSTRUCTION

- A. At the completion of the Work, the Contractor shall remove from the Project site all temporary utilities and services construction. Leave the Project site clean and free from debris, materials, or equipment.

END OF SECTION 01 51 00

SECTION 01 52 00

CONSTRUCTION FACILITIES

PART I - GENERAL

1.01 SECTION INCLUDES A.

Field Offices and Sheds

B. Temporary Facilities

C. Temporary Sanitary Facilities

1.02 RELATED SECTIONS

A. Section 011100 – SUMMARY OF THE WORK

B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner continued use of the areas and spaces adjacent to construction.

C. Section 017400 – CLEANING

D. Section 017700 – CLOSEOUT PROCEDURES

1.03 FIELD OFFICES AND SHEDS

A. Field Office: Contractor shall provide a job office that will conform to the following minimum requirements:

1. Suitable space for Workstations, drawings, specifications, samples and other project records.
2. Conference space for eight (8) persons, including layout tables.
3. Heating and cooling to maintain a reasonable working environment.
4. Telephone, Data and WIFI service as specified in Section 015100 – TEMPORARY UTILITIES
5. Furnishings required: Conference table and chairs; racks and files for Contract Documents, submittals, and project record documents. Other furnishings are at Contractor's option.

B. Installation: Install office spaces for occupancy fifteen (15) calendar days after date of Owner/Contractor agreement.

C. Preparation: Fill and grade sites for temporary structures to provide drainage away from buildings.

- D. Contract Documents: Complete set of Contract Drawings and Contract Specifications shall be kept continuously at the site. Copies of all Change Orders, letters, Shop Drawings, etc., shall be kept on the jobsite at all times and shall be available for inspector's use.
- E. Contact numbers: Contractor shall provide telephone numbers where Contractor may be reached at all times during normal working hours and after normal working hours, if emergency problems develop that require Contractor's assistance.
- F. Storage Sheds and Containers for Materials, Tools and Equipment: If requested, Owner will provide space outside construction site where Contractor may provide and locate weather-tight sheds or containers for storage of construction materials, tools and equipment. Contractor shall be solely responsible for security of such sheds and containers. Size storage requirements to allow access, orderly provision of maintenance and inspection of products.
- G. Cleaning: Weekly janitorial services for offices; periodic cleaning and maintenance for office and storage areas. Contractor shall keep construction loading and parking areas clear of construction debris, especially debris that may cause slipping or tripping hazard that may injure vehicle tires, that may stain surfaces, and that may be tracked into existing buildings. Maintain approach walks free of mud and water.
- H. Removal: Upon completion of the work, and before the final payment, Contractor shall remove all temporary work and facilities and return site to condition required by the General Conditions of the Contract and at no change to the Contract Sum or the Contract Time.

1.04 TEMPORARY FACILITIES

- A. Contractor shall provide and maintain the following temporary facilities as required for execution of the Work:
 - 1. Scaffolding, staging, runways and similar equipment.
 - 2. Hoists or construction elevators, complete with operators, power and signals required.
 - 3. Temporary rigging, rubbish chutes, barricades around openings, ladders between floors, and similar equipment.
 - 4. Barricades, fencing, lights and similar safety precautions.
 - 5. Security cameras for remote video surveillance of the project site and 24/7 monitoring services that records and reports incidents and alarms. Security cameras to provide full coverage of the construction and storage site area.
- B. Maintenance: Use all means necessary to maintain temporary construction facilities and controls in proper and safe condition throughout progress of the Work.
- C. Replacement: In event of loss or damage, promptly restore temporary construction facilities and controls by repair or replacement at no change to the Contract Sum or the Contract Time.
- D. Conformance: All materials and equipment required to safely accomplish work under this Section shall be in conformance with requirements of CAL OSHA and other State and Federal Codes and regulations where applicable.

- E. Codes: All temporary work and facilities shall conform to the above requirements that pertain to operation, safety and fire hazard.
- F. Construction Site Security: Temporary barriers, doors and gates shall be keyed to Owner's master lock system. Security hardware to be provided by Contractor. Keying to Owner master lock system will be provided by Owner.

1.05 TEMPORARY SANITARY FACILITIES

- A. Use of existing facilities: Designated toilet facilities may be used by Contractor.
 - 1. Assigned facilities: Location of assigned toilet facilities and maintenance of same are responsibility of Owner. Contractor shall not have exclusive use to these facilities and shall abide by health and safety criteria regarding their use and sanitary upkeep.
 - 2. Unassigned facilities: Unassigned toilet facilities shall not be used without written authorization of Owner's Representative.
 - 3. Contractor may use existing toilet facilities that are within the limits of the Work. B.

Contractor shall pay service charges for connection and use of sewage utilities.

- C. Portable units: Enclosed, portable, self-contained units or temporary water closets and urinals, secluded from public view may be used. Self-contained units shall be approved by Owner's Representative prior to use.
 - 1. Contractor shall pay costs of installation, maintenance and removal of temporary sanitary facilities.
 - 2. Provide facilities at time of site mobilization.
 - 3. Modify and extend services as work progress requires.
 - 4. When utility services are available, provide water, sewer service, and temporary water closets; remove portable facilities. Remove temporary fixtures when permanent facilities are operational.
 - 5. Clean areas of facilities daily, maintain in sanitary condition. Disinfect fixtures, repair or replace damaged fixtures, accessories and surfaces.
 - 6. Provide toilet paper, paper towels, and soap in suitable dispensers.
 - 7. Restore existing and permanent areas and facilities used to original condition. Remove all temporary construction facilities above and below grade. Leave the project site clean and free of debris, materials and equipment.

PART II - PRODUCTS

2.01 MATERIALS

- A. Serviceable, new or used, adequate for required purpose. PART III -

EXECUTION – Not Applicable to this Section

END OF SECTION 01 52 00

SECTION 01 55 00

VEHICULAR ACCESS AND PARKING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Parking and Access Roads
- B. Traffic Regulation
- C. Project Informational Signs

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner's continued occupancy and use of the areas and spaces adjacent to construction.
- D. Section 017400 – CLEANING
- E. Section 017700 – CLOSEOUT PROCEDURES: Project Closeout.

1.03 PARKING AREAS AND ACCESS ROADS

A. Access Roads: Existing roads shall be used for construction access within limits defined herein. Temporary construction access roads shall not be permitted. B. Parking: Parking is controlled and limited by Owner.

- 1. Parking of personal vehicles belonging to Contractor employees may be arranged at the project site with Owner's Project Manager Approval. Parking will be allowed in employee permit areas, at the current permit rates depending on space availability.
- 2. Delivery of materials may be made to the job-site as required. Contractor shall coordinate with Owner's Representative.
- 3. Dumpsters shall be located in approved location as arranged by Owner's Representative.
- C. Existing Pavements and Parking Areas: Designated existing on-site streets and driveways may be used for construction traffic. Vehicles with metal tracks will not be allowed.
 - 1. Designated areas of existing parking facilities may be used by construction personnel. Do not allow heavy vehicles or construction equipment in parking areas.

2. Maintain traffic and parking areas in a sound condition, free of excavating material, construction equipment, products, mud, snow and ice.
3. Maintain existing and permanent paved areas used for construction. Repair existing facilities damaged by usage to original condition: promptly repair breaks, potholes, low areas, standing water and other deficiencies, to maintain paving and drainage in original or specified condition.
4. Remove temporary materials and construction when permanent paving is usable.

1.04 TRAFFIC REGULATION

- A. Schedule of Access Closing: Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. Contractor shall provide schedule of planned closing of any street for approval by Owner and shall give minimum of fourteen (14) calendar days' notice before closing any street or access.
- B. Use of Fire Lanes: Contractor shall notify Owner of all major pickups and deliveries that require use of controlled access fire lanes. Keys to gates or other barriers will be provided, as needed, to allow use of fire lanes. Vehicles parked in fire lanes for delivery of materials shall be continuously manned for immediate removal if required by the Owner.
 1. Fire Lanes to remain open at all times and shall not be blocked without a Traffic Control Plan provided prior to work at the Fire Lane and approved by the Owner's Representative.
- C. All major pick-up and delivery operations shall occur in total before or after normal working hours.
 1. Drawings may indicate haul routes designated by Owner for use of construction traffic. Confine construction traffic to haul routes.
 2. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.
- D. Post-mounted and wall-mounted traffic control and informational signs as specified herein.
 1. Traffic Control Signs, Traffic Message Boards, Cones, Drums, Flares, Lights and Flag Control equipment: All as approved by California MUTCD requirements.
 2. Contractor shall furnish at all barricades: Lights and flag control required to control traffic, and shall also provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for protection of the public; and maintain from the beginning of twilight throughout the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and/or the Work.
- E. Construction Vehicle Parking: Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations. Prevent parking on or adjacent to roads or in non-designated areas.
- F. Flag Control: Provide properly trained and equipped flagmen to regulate vehicular traffic when construction operations or traffic encroach on public traffic ways.

1. Provide properly trained and equipped personnel to regulate pedestrian traffic at all interior locations where construction traffic interfaces with Owner traffic.
 2. Flag control personnel shall wear appropriate identifying clothing such as bright colored vests, clearly visible and identifiable as having responsibility for traffic control.
- G. Lights: Use lights during hours of low visibility to delineate traffic lanes and to guide traffic.
- H. Traffic Signs and Signals: At approaches to site and on site, install traffic signs and signals at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
1. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.
 2. Relocate traffic signs and signals as Work progresses, to maintain effective traffic control.
 3. Remove equipment and devices when no longer required. Repair damage caused by installation.

1.05 PROJECT INFORMATIONAL SIGNS

- A. Project Identification Sign: Contractor shall provide one (1) project sign. Sign will consist of one (1) 8' x 4' x 3/4" exterior grade plywood with medium or high-density phenolic sheet overlay, painted plywood sign on fence area at construction field office or yard.
1. Information on sign shall include PROJECT NAME, Owner Name, Owner's consultants, etc. Copy will be provided by the Owner.
- B. Painted Informational Signs: Provide at each field office, storage shed and yard, directional signs to direct traffic into and within site. Relocate as Work progress requires. C. Maintain signs and supports: Clean, repair deterioration and damages.
- D. Remove signs, framing, supports and foundations at completion of Project and restore the area.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 55 00

SECTION 01 56 00

TEMPORARY BARRIERS, ENCLOSURES and CONTROLS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Barriers and Enclosures

B. Protected Walkways and Weather Closures

C. Tree and Plant Protection

D. Temporary Controls

1.02 RELATED SECTIONS

A. Section 011000 – SUMMARY OF THE WORK

B. Section 017400 – CLEANING

1.03 BARRIERS AND ENCLOSURES

A. Barricades: Provide to prevent public entry, to protect existing trees and plants, and to protect existing facilities and adjacent properties from damage during construction period. Relocate and extend as construction progress requires. B. Partitions and Ceiling Enclosures:

1. Fire Enclosures-Rated-Corridors and Rated Assemblies: Provide non-combustible dust-proof barrier framed with 20-gauge metal studs spaced 24" o/c maximum and covered on both sides with 5/8" thick Type-X rated gypsum wallboard fire taped, braced so to be self-supporting without fastening to existing finishes.
 - a. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finish.
 - b. Finish exposed surfaces with two (2) coats of paint (color as selected by Owner), maintain in neat, orderly appearance and paint barrier on public side. Temporary emergency exit and or directional signage indicating Emergency Exits will be furnished and installed by Contractor.
 - c. Provide temporary doors in corridors with twenty (20) minute fire-rated assemblies and locksets to limit use.
 - d. Use of access doors and routes by workmen to be approved by Owner's Representative.

2. Fire Retardant Enclosures - Non-Rated Assemblies: Provide non-combustible dust-proof barriers framed with metal studs and covered on public side with Fire Retardant plastic laminate sheathing material. Flame spread 10 - smoke development 45 - fuel contribution undeterminable, as manufactured by Reef Industries, Inc., P.O. Box 33248, Houston, TX77033 or equal.
 - a. Joints shall be taped and sealed over framing studs.
 - b. Bracing shall be self-supporting without fastening to existing finishes.
 - c. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finishes.
 - d. Provide non-staining taped seal to surrounding materials to insure seal.
 - e. Non-Rated Assemblies for Dust Control: Use ½" Type-X or equal gypsum wallboard applied on occupancy side on framing member. Joints over studs shall be taped and sealed. Other detail similar to 1.03-B.2 above.

C. Removal: Remove temporary materials, equipment and construction at completion; repair damage caused by installation or use of barricades and enclosures. Restore existing facilities used during construction to specified or to original condition.

1.04 DIESEL VEHICLE/EQUIPMENT IDLING PROCEDURES

- A. When drivers of diesel powered on-road vehicles arrive at loading or unloading areas to drop-off or pick-up passengers, supplies, equipment, materials, etc., they shall turn off their vehicle's engine as soon as possible but no later than five minutes after arrival.
- B. Operators of off-road diesel-powered equipment shall turn off their engines when the equipment is not performing its primary function, but no later than five minutes after the equipment has come to a stop.
- C. Idling for "warm-up" prior to diesel vehicle or equipment operations on Owner property shall be limited to a maximum of five minutes.
- D. At end of work shift, or for the purpose of servicing, all diesel equipment shall be parked on site at furthest location away from Facility air intake systems.
- E. All diesel-powered equipment shall be maintained in good operating condition. Owner representative will direct Contractor to remove any equipment producing high amount of diesel fumes resulting from diesel equipment being old or in poor operating condition.

1.05 PROTECTED WALKWAYS AND WEATHER CLOSURES

- A. Cover walkways to provide access to existing facilities for use by public and Owner personnel.
- B. Provide temporary roofing and weather-tight insulated closures of openings in exterior wall surfaces, to maintain specified working conditions, to protect products and finished work from inclement weather.

- C. Critical access and protected walkways shall comply with the CBC and CFC.

1.06 TREE AND PLANT PROTECTION

- A. Tree Protection: All trees not marked for removal shall be protected against damage from construction operations. Where necessary, in the opinion of Owner's Representative, trees surrounding building footprint or in close proximity to construction operation shall be protected with barricades. No trees shall be cut or felled without approval of Owner's Representative. Trees cut and/or removed without explicit instruction shall be replaced by Contractor at no cost to the Owner.
- B. Cutting and Pruning: Cutting and pruning of trees to accommodate construction shall be done only with approval and direction by Owner's Representative. Soil within the spread of tree branches (within drip line) shall not be disturbed except as directed by excavation or trenching drawings. Advance notice shall be given Owner if tree roots of 3" diameter or greater must be cut.
- C. Drip line Protection: Cars, trucks, or equipment shall NOT be parked or set within the drip line of any tree; nor shall there be any stockpiling or temporary building erected within the drip line.

1.07 TEMPORARY CONTROLS

- A. Dust Control: Contractor shall take appropriate steps throughout project to prohibit airborne dust due to work under this contract. Execute work by methods to minimize raising dust from construction operations. Water shall be applied wherever practical to settle and hold dust to minimum, particularly during demolition and moving of materials. No chemical dust prohibitor shall be used without written approval by Owner's Representative.
- B. Noise Control: Control noise as directed by Owner's Representative.
- C. Pollution Control: Use of noxious or toxic materials for all applications in alterations or work in buildings occupied by Owner personnel shall be done after proper notification and approval by Owner, this includes work performed on weekends or other unoccupied times.
 - 1. Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- D. Waste Control: All waste materials resulting from process of clearing and construction shall be disposed of as follows:
 - 1. General Refuse: All refuse and debris, combustible and incombustible, resulting from construction process, shall be removed from Owner property as described in the General Conditions of the Contract. Contractor shall not use any refuse container belonging to Owner.
 - 2. Hazardous Refuse: Solvents, oils and any other hazardous material shall be disposed of in containers and removed from site. At completion of work, any contaminated soil shall be removed and replaced with good soil by Contractor at no expense to Owner. Coordinate disposal with Lake County EH&S department.
 - 3. Building materials containing asbestos that are part of the project shall not be disturbed or removed by the contractor during the construction of temporary barriers, enclosures and

controls. The contractor shall request from the Owner's Representative materials that have been identified on the project to contain asbestos so that these materials are not disturbed. The contractor shall refer to Hazardous Materials Procedures regarding materials impacted by construction of temporary barriers, enclosures and controls.

- E. Drainage Control: All portions of Work shall be kept free of standing water at all times during construction. Where required, temporary drainage ditches, berms, or pumping systems shall be constructed to divert drainage water from construction site, and resultant water shall be carried to nearest natural water course and disposed of without erosion to surrounding area. Care shall be taken to prevent silting of existing sinkholes and watercourses. Silt deposited as a result of the Work shall be removed and disposed of by Contractor at no cost to the Owner.
1. Rough grade site to prevent standing water and to direct surface drainage away from excavations, trenches, adjoining properties and public rights-of-way/s.
 2. Maintain excavations and trenches free of water. Provide and operate pumping equipment of a capacity to control water flow.
 3. Provide de-watering system and pumping to maintain excavations dry and free of water inflow on a twenty-four (24) hour basis.
 4. Provide piping to handle pumping outflow to discharge in manner to avoid erosion or deposit of silt. Provide settling basins to avoid silting; install erosion control at out-falls of system.
 5. Winterize and stabilize site with Geotextile Fabric and gravel so that the site drains and avoids it becoming a quagmire. Maintain access roads on the site with Geotextile Fabric and gravel and make repairs to avoid furrow, ruts, or potholes.
 6. Remove equipment and installation when no longer needed.
- F. Sediment and Erosion Control: Contractor shall furnish, install and maintain means and methods to reduce excessive erosion, minimize sedimentation discharge, and prevent construction materials discharge from causing off-site and on-site contamination. Contractor shall coordinate with Owner.
1. Contractor shall pay for and maintain required permits.
 2. Contractor shall furnish:
 - a. National Pollutant Discharge Elimination (NPDE) permit.
 - b. Contractor shall file Notice of Intent to California State Water Resources Control Board (SWRCB) stating date construction will begin. Provide copy to Owner.
 - c. Contractor shall prepare, maintain and follow Storm Water prevention Plan. The Plan shall include Contractor's Best Management Practices (BMP) describing means and methods to control sediment, erosion and other pollutants.
 - d. Contractor shall keep BMP Program at jobsite.

PART II - PRODUCTS

2.01 Polyethylene: Polyethylene used for critical barriers and for sealing walls, floors or ceiling systems shall be a minimum of 6 mil thickness and fire-retardant type listed by Fire Underwriters Laboratories, Griffolyn #T55R with Griffolyn fire retardant tape, or equal.

PART III - EXECUTION

END OF SECTION 01 56 00

SECTION 01 61 00

PRODUCT REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Product Options

- B. Product Substitutions
- C. Product Transportation and Handling Requirements
- D. Product Storage and Protection
- E. Product System Completeness

1.02 RELATED SECTIONS

- A. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- B. Section 013900 - GREEN BUILDING POLICY IMPLEMENTATION
- C. Section 014100 – REGULATORY REQUIREMENTS
- D. Section 014500 – QUALITY CONTROL

1.03 PRODUCTS

- A. Product Selection: Provide products that comply with Contract Documents, are undamaged and unused at installation.
- B. Product Completeness: Provide products complete with all accessories, trim, finish, safety guards and other devices needed for complete installation and for intended use and effect.
- C. Products: Items purchased for incorporation in Work, whether purchased for project or taken from previously purchased stock; this includes materials, equipment, assemblies, fabrications and systems.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model designation indicated in the manufacturer's published product data.
 - 2. Materials: Products that are shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed or installed to form part of the Work.
 - 3. Equipment: A product with operating parts, whether motorized or manually operated, requiring connections such as wiring or piping.
- D. Specific Product requirements: Refer to requirements of Section 014500 – QUALITY CONTROL and other Sections in Division 2 through 49 for specific requirements for products.
- E. Code Compliance: All products, other than commodity products prescribed by Code, shall have current listing service report or research report. Minimum Requirements: Specified requirements are minimum requirements.

- F. Interchangeability: To fullest extent possible, provide products of the same kind from single source. Products supplied in quantity shall be same product and interchangeable throughout the Work. When options are specified for selection of any of two (2) or more products, product selected shall be compatible with products previously selected.
- G. Nameplates: Except for required labels and operating data, do not attach manufacturer's name plates or trademarks on surfaces exposed to view in occupied spaces or on the exterior of building.
- H. Equipment Nameplates: Provide permanent nameplate on each item or service-connected or power-operated equipment. Locate on inconspicuous accessible surface. Nameplate shall contain the following information and essential operating data:
 - 1. Name of product and manufacturer
 - 2. Model and serial number
 - 3. Capacity and Speed
 - 4. Ratings and other pertinent information
- I. Listing Service: Products, for which listing service standards have been established and for which their service label is available, shall bear the appropriate listing service label.

1.04 PRODUCT OPTIONS

- A. Products Specified Only by Description: Where the Contract Specifications describe a product, listing characteristics required, with or without use of a brand name, provide a product that provides the appropriate characteristics and otherwise complies with the requirements.
- B. Performance Specification: Where Contract Specifications require compliance with performance requirements, provide products that comply and are recommended for application. Manufacturer's recommendations may be contained in Product literature, or by certification of performance.
- C. Compliance with Standards: Where Contract Specifications require compliance with a standard, select a product that complies with the standard specified.
 - 1. Wherever catalog numbers and specific brands or trade names followed by the designation "to match existing" are used in conjunction with product(s) required by the Contract Specification, no substitution will be considered.
- D. Products Specified by Naming One (1) or More Manufacturers:
 - 1. Specified manufacturer(s): Provide specified product(s) of the specified manufacturer. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the design used in the Work and the use of alternative-named products or substitutes may require modifications in that design. If such alternatives are proposed by Contractor and are approved by Owner, Contractor shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to Owner for evaluation of revisions and modifications of the design resulting from the substitutions submitted by Contractor.
 - a. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and "or equal" supporting data for second manufacturer's product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitution.

2. Quality Standard: Products(s) of the specified manufacturer shall serve as standard by which the product(s) of other named manufacturers are evaluated.
- E. "Or Equal" Provision: Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by Contract Specification to establish standard of quality, utility, and appearance required.
1. "Or Equal" Products: Equivalent products of manufacturers other than the specified manufacturer may be provided if determined by Owner's Representative to be acceptable in accordance with substitution provisions following:
 - a. Contractor shall submit to Owner's Representative, within thirty-five (35) calendar days after the date of commencement of the Work specified in the Notice to Proceed, a list in excel format containing Specification Section number with extension i.e. 088000 2.B.1.a. with descriptions of each product proposed for substitution.
 - b. Contractor shall provide supporting data as required herein.
 - c. Owner will evaluate Contractor's proposal. The decision of Owner shall be final.
 - d. Owner will accept, in writing, proposed substitutions that are in Owner's opinion equal in quality, utility and appearance to the product specified. Such acceptance does not relieve Contractor from complying with requirement of the Contract Documents.
 - e. Contractor shall be responsible for all costs of any changes resulting for Contractor's proposed substitutions that affect other work, or the Work of Separate Contractor.
 - f. Failure to place orders for specified products sufficiently in advance of required date for incorporation into the Work will not be considered justification for Contractor to request a substitution or deviation from requirements of the Contract Documents. The sixty (60) calendar day submittal period does not excuse Contractor from completing the Work within the Contract Time.
 2. Contractor's Determination: Prior to submitting "or equal" product(s) for consideration, Contractor shall review and determine product(s) meet or exceed the quality and warranty provisions of the specified product.
 3. Late Substitution Requests: If a request for substitution occurs after the sixty (60) calendar day period, the substitution may be reviewed at the discretion of Owner and the costs of such review, as approved by Owner, shall be deducted from the Contract Sum.
 - a. Product Availability Waiver: Substitutions will be considered after the sixty (60) calendar day period only when a product becomes unavailable due to no fault of the Contractor.
- F. Visual Matching: Where Contract Specifications require matching a sample, Owner's decision on proposed product match is final. If no product matches and complies with other requirements, comply with provisions for "substitutions" for selection of a matching product in another category.
- G. Visual Selection: Where requirements include the phrase "....as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product that complies with other

requirements. Owner's Representative will select color, pattern and texture from the product line selected.

1.05 SUBSTITUTIONS

- A. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract shall be considered "substitutions". The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by Owner's Representative or Owner's Consultant.
 - 2. Specified options of products and construction methods included in Contract Documents.
 - 3. Compliance with governing regulations and orders issued by governing authorities.
- B. Substitution Provisions: Requests for Substitutions will only be considered if Contractor submits the following data:
 - 1. Furnish complete technical data including drawings, performance specifications, samples, test reports and any additional information required by Owner's Representative, for each product proposed for substitution.
 - a. Submit ONE (1) PDF file with bookmarks.
 - b. In reviewing supporting data for substitution, Owner will use, for purpose of comparison, all characteristics of Basis of Design specified product as it appears in manufacturer's published data even though all characteristics may not have been particularly mentioned in the Contract Specifications. If more than two (2) substitutions of supporting data are required, Owner's costs of reviewing additional supporting data will be deducted from the Contract Sum.
 - c. Submit statement indicating substitution's effect on the Construction Schedule, if any.
 - d. Submit cost information, including proposal of net deduction, if any, from Contract Sum.
 - 2. Furnish statement by Contractor that proposed substitution is in full compliance with requirements of Contract Documents and Applicable Codes.
 - 3. Provide a Comparison Table as part of the substitution request listing the design and performance criteria of the Basis of Design specified product with the proposed substitution product side by side. The design and performance criteria shall include but not limited to; size, thickness, gauge, strength, function, ASTM rating, test report data, manufacturing association standards & data, technical properties & performance data, traffic or weather resistance, quality assurance data, warranty and other design and performance criteria list in Basis of Design manufactures specification and written material.
 - 4. Furnish list of Subcontractors, if any, that may be affected by the substitution.
 - 5. If proposed substitution requires portions of the Work to be redesigned or removed in order to accommodate substituted product, submit design and engineering calculations prepared by the licensed design professional of record.
 - 6. Contract Document Revisions: Should Contractor-proposed or alternate sequence or method of construction require revision of Contract Documents, including revisions for

purpose of determining feasibility, scope or cost, or revisions for the purpose of obtaining approval by governing authorities having jurisdiction, revisions will be made by Owner's Consultant who is the design professional of record.

- a. Services of Owner's Consultants, including time spent in researching and reporting on proposed substitutions or alternate sequences and methods of construction, shall be paid by Contractor when such activities are considered additional services to the design services contracts of Owner.
- b. Cost of services by Owner's Consultants shall be paid on a time and material basis, based on current hourly fee schedules, with reproduction,

long distance telephone and shipping costs reimbursable. Such fees shall be paid whether or not the proposed substitution or alternate sequence or method of construction is ultimately accepted by Owner and Change Order executed. Such fees owed shall be deducted from the Contract sum on the next Application for Payment.

7. Submit all proposed substitutions in writing to Owner using the Request for Substitution form provided at the back of this Section.

- C. Owner may reject any substitution not proposed as described above and presented within the time prescribed.
- D. Revisions to submittals: If Owner's Representative, in reviewing list of substitutions, requires revisions or corrections to previously accepted Shop Drawings and supplemental supporting data, Contractor shall promptly do so. If any proposed substitution is judged by Owner's Representative to be unacceptable, the specified product shall be provided at no cost to the Owner.
- E. Samples: Samples may be required. Tests required by Owner's Representative for determination of quality and utility shall be made by Contractor's independent testing Laboratory, at expense of Contractor, with prior Owner acceptance of test procedure.

1.06 TRANSPORTATION, DELIVERY AND HANDLING

- A. Transport products by methods to avoid product damage.
- B. Schedule delivery to minimize long-term storage and prevent overcrowding construction spaces. Coordinate with installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
- C. Deliver products in undamaged condition in manufacturer's original sealed container or packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- D. Provide equipment and personnel to handle products by methods to prevent soiling, marring or other damage.
- E. Promptly inspect products on delivery to ensure products comply with Contract Documents, quantities are correct, and to ensure products are undamaged and properly protected. Promptly remove damaged or defective products from site and replace at no adjustment to the Contract Sum and/or Contract Time.

1.07 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store products to facilitate inspection and measurement of quantity or counting of units.
- C. Store heavy materials away from structures in a manner that will not endanger supporting construction.
- D. Store sensitive products in weather-tight enclosures. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation.
 - 1. Maintain temperature and humidity within range required by manufacturer's instructions.
 - 2. Exterior Storage:
 - a. Store products above ground on blocking or skids to prevent soiling, staining and damage.
 - b. Cover products that are subject to damage by the elements with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.
 - c. Store sand, rock, aggregate or other loose granular material in well drained area on solid surfaces. Prevent mixing with foreign matter.
 - 3. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and maintained under required conditions, free from damage and deterioration.
- E. Protection After Installation: Provide barriers, substantial coverings, notices and other materials or methods as necessary to protect installed work from traffic, subsequent construction operations and weather.
 - 1. Maintain temperature and humidity conditions in interior spaces for Work in accordance with manufacturers' instructions for materials and equipment being protected.
 - 2. Remove protective measures when no longer required and prior to Acceptance of the Work.

1.08 SYSTEM COMPLETENESS

- A. The Contract Drawings and Contract Specification are not intended to be comprehensive directions on how to produce the Work. Rather, the Drawings and Specifications are instruments of service prepared to describe the design intent for the completed Work.
- B. It is intended that equipment, systems and assemblies be complete and fully functional even though not fully described. Provide all products and operations necessary to achieve the design intent described in the Contract Documents.
- C. Contractor is urged to report to Owner's Representative immediately when elements essential to proper execution of the Work are discovered to be missing or misdescribed in the Contract Documents or if the design intent is unclear.
- D. Should an essential element be discovered as missing or misdescribed prior to receipt of bids or establishing a negotiated Contract Sum, an Addendum or Clarification will be issued so that all cost may be accounted in the Contract Sum.

- E. Should an obvious omission or misdescription of a necessary element be discovered and reported after execution of the Agreement, Contractor shall provide the element as though fully and correctly described.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSTALLATION OF PRODUCTS

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

3.02 Refer to the following Attachment:

- A. Request for Substitution Form.

END OF SECTION 01 61 00
REQUEST FOR SUBSTITUTION

Substitution #: _____ Submittal #: _____ Date: _____

Specification Project#:

#: _____

PROJECT NAME: _____

<p>COUNTY OF LAKE PUBLIC SERVICES 333 2nd Street TO: Lakeport, CA 95453</p> <p>P: 707-262-1618 C: 707-245-6911</p> <p>Attn.: Project Manager Joseph.Cooper@lakecountycalifornia.gov</p>	<p>FROM:</p>
--	--------------

Name of Party Submitting Request for Substitution:

Reason for Submitting Request for Submission: _____

Specification Section and Paragraph #: _____

Substitution Manufacturer name and address: _____

Proposed substitution (trade name of product, model or catalog #): _____

Fabricators and Suppliers (as appropriate): _____

PRODUCT DATA:

ATTACH PRODUCT DATA AS SPECIFIED IN SPECIFICATION SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Similar projects using product (list dates of installation and names/phone numbers of Owners):

Similar comparison of proposed substitution with specified product (indicate variation(s), and reference each variation to appropriate Specification Section paragraphs):

-ATTACH COMPARISON SUMMARY-

(SUBSTITUTION REQUEST CONTINUES)

Quality and performance comparison between proposed substitution and specified product:

Availability of maintenance services and replacement materials: _____

Effect of proposed substitution on Construction Schedule:_____

Effect of proposed substitution on other work or products: _____

SECTION 01 72 00

PREPARATION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Surveying and Field Engineering Services

1.02 RELATED SECTIONS

- A. Section 014500 – QUALITY CONTROL
- B. Section 017800- CLOSEOUT SUBMITTALS

1.03 REGISTRATION REQUIREMENT

- A. Contractor shall employ civil engineers/land surveyors, which are registered and licensed in the state of California and acceptable to the Owner.

1.04 LINE AND GRADES

- A. Contractor shall provide all construction survey work required for accurate location of the Work. Horizontal and vertical control for the Work shall be from project reference marks as shown on Contract Drawings. Owner's decision will be final in all questions regarding proper location of work.
- B. Contractor shall verify final configuration of project during demolition work. Minor adjustments of work to accommodate existing field conditions shall be responsibility of Contractor.
- C. For work that connects to existing structures with new floors or roofs that align with existing conditions; Contractor shall verify new and existing elevations prior to constructing the new floor or roof structure. Adjust elevations accordingly so that the new and existing floors are level and lineup.
 - 1. Owner approval in writing is required for any deviations from the contract documents intent.
- D. Replace control points that may be lost or destroyed, base requirements on original survey control, at no increase in the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify locations of survey control points prior to starting work. Promptly notify Owner's Representative of any discrepancies discovered.

3.02 SURVEY REFERENCE POINTS

- A. Protect survey control points prior to starting site work; preserve permanent reference points during construction. Make no changes without prior written notice to Owner's Representative.
- B. Promptly report loss or destruction of any reference point or relocation required to Owner's Representative. Replace dislocated survey points based on original survey control.
- C. All control points established for the project must be clearly shown on the record documents.

3.03 SURVEY REQUIREMENTS

- A. Establish minimum of three (3) permanent benchmarks on site, referenced to establish control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements, including pavements, stakes for grading, fill and topsoil placement, utility locations, slopes and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations and ground floor elevations.
 - 4. Controlling lines and levels required for mechanical and electrical work.
 - 5. Verify layouts as Work proceeds to assure compliance with required lines, levels and tolerances.
- C. Periodically certify layouts by same means.

3.04 RECORDS

- A. Maintain complete and accurate log of all control and survey work as it progresses Including but not limited to items indicated in 3.03, B. and 3.04, B.
- B. On completion of foundation walls, underground utilities and major site improvements, prepare certified survey showing all dimensions, locations, angles and elevations of construction. Provide as part of the As-Built Documents per Section 017800.

END OF SECTION 01 72 00

SECTION 01 73 00

CUTTING AND PATCHING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching Work.
- B. Hazardous Conditions Permit requirements for brazing, welding and other hot work.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013100 – COORDINATION
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- E. Section 016100 – PRODUCT REQUIREMENTS
- F. Individual Specifications Sections.
 - 1. Cutting and patching incidental to Work specified in this Section.
 - 2. Coordination with work in other Sections for openings required to accommodate Work specified in those other Sections.

1.03 SUBMITTALS

- A. Contractor shall complete and submit for review to Owner's Representative, a Coring/Sawcutting Form, included at the end of this Section, and obtain written authorization for Owner prior to the commencement of any dig activities. Contractor shall

include all pertinent information with the Coring/Sawcutting Form and submit with detailed work plan fourteen (14) calendar days prior to desired coring/cutting activity.

- 1. Structural integrity of any element of Project.
- 2. Integrity of weather-exposed or moisture-resistant element.
- 3. Efficiency, maintenance, or safety of any operational element.
- 4. Visual qualities of sight-exposed elements.
- 5. Work of Owner.

6. Utility supply, drains, fire alarm, communication. B. Include in request:

1. Identification of Project, including Owner's Project Name and Project Number.
2. Location and description of affected Work.
3. Necessity for cutting and patching.
4. Description of proposed work, and products to be used.
5. Alternatives to cutting and patching.
6. Effect on work of Owner.
7. Written permission of Owner.
8. Date and time work will be executed.

1.04 NOTIFICATIONS

A. Before starting welding or cutting work involving the use of gas or electric welding equipment, or any brazing work involving gas or electric brazing equipment Contractor shall complete a Hazardous Conditions Permit form. Contractor shall allow seventy-two (72) Hours for Fire Marshal's approval and issuance of Hazardous Conditions Permit. This permit will be issued without cost to Contractor and may be applicable to more than one (1) building. Contractor shall be responsible for reporting to Lakeport Fire Department either by telephone or in person at beginning and end of each day's work. Provide minimum written notice of fourteen (14) calendar days prior to such activities.

1. Welding and brazing personnel must be certified by an Owner approved laboratory and must maintain this certification during the work of this Contract.
2. Contractor is responsible for notifying Owner of all apparent locations where suspect asbestos containing materials may be present or discovered during the course of the project such as cement pipes or other insulated material, which may be a result of newly excavated materials below grade or after building systems are opened such as within wall, ceiling or subfloor spaces. When any such location is discovered by Contractor, information relating thereto shall be immediately communicated to Owner's Representative.
3. Where welding and cutting activity is required and suspect painted surfaces are present that will be impacted by the welding or cutting activity, the contractor shall request from the Owner's Representative information regarding laboratory analysis for lead or other hazardous metals in the painted metal components before any cutting or welding is performed. The contractor shall refer to Section 013500 Special Procedures, 1.05 Hazardous Materials Procedures regarding materials impacted by welding and cutting activity.
4. Contractor shall then follow any and all instructions as indicated by Owner's Representative.

PART II - PRODUCTS

2.01 MATERIALS

- A. Product substitution: For any proposed change in materials, submit request for substitution under provision of SECTION 016100 – PRODUCT REQUIREMENTS. Use only materials for cutting, fitting, and patching which comply with the applicable

Specification Sections, and which match adjacent materials. Use materials whose installed performance will equal or surpass that of existing materials.

PART III - EXECUTION

3.01 EXAMINATION

- A. General: Execute cutting, fitting and patching including excavation and fill, to complete Work and:
 - 1. Fit the several parts together, to integrate with other work.
 - 2. Uncover work to install ill-timed work.
 - 3. Remove and replace defective and non-conforming work.
 - 4. Remove samples of installed work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical work.
- B. Examination, General: Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
 - 1. After uncovering existing Work, inspect conditions affecting proper accomplishment of Work.
 - 2. Beginning of cutting or patching shall be interpreted to mean that existing conditions were found acceptable by Contractor.
- C. Ground Penetrating Radar: Determine by Ground Penetrating Radar all existing reinforcing, conduit and piping located in concrete walls and slabs prior to demolition. Clearly mark all locations and review with Owner Representative prior to demolition.

3.02 PREPARATION

- A. Temporary Supports: Provide supports to assure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Weather Protection: Provide protection from elements in all areas that may be exposed by uncovering work. Maintain excavations free of water.
- C. Protection. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas. Do not block required exit ways or stairs.
- E. Protect rated floor, wall and ceiling assemblies. Prior to cutting opening in a rated assemblies review with Owner's Representative and get written approval from the Lakeport Fire District Fire Marshal.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching to properly complete Work.
- B. Coordinate installation or application of products for integrated Work.
- C. Uncover completed Work as necessary to install or apply products out of sequence.
- D. Remove and replace defective or non-conforming Work.
- E. Provide openings in the Work for penetrations of mechanical and electrical Work.
- F. Provide cutting and patching to accommodate all demolition work as part of this contract. Provide level and plumb cuts at locations that will be exposed or to provide smooth and even surface for patching to existing work or surfaces.
- G. Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

3.04 PERFORMANCE

- A. Execute cutting and patching by methods to avoid damage to adjoining Work, and that will provide appropriate surfaces to receive final finishing.
- B. Execute cutting and patching of weather-exposed, moisture-resistant and sight-exposed surfaces by methods to preserve weather, moisture and visual integrity.
- C. Restore work with new Products as specified in individual Sections of Contract Documents.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval from Owner. Coordinate timing of all sawing and cutting work with the Owner's Representative. Do not over saw cut corners and intersection unless written authorization is provided from the Owner Representative and the Structural Engineer of Record.
- E. Fit work neat and tight allowing for expansion and contraction. Butt new finishes to existing exposed structure, pipes, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of firewalls, partitions, ceiling, or floor construction, completely seal voids with UL approved fire-rated assembly. Provide temporary closures at the end of each workday. Closures shall be approved by the Lakeport Fire District Fire Marshal.
- G. Refinish surface to match adjacent finish. For continuous surfaces, refinish to nearest intersection, corner or natural break and from floor to ceiling. For an assembly, refinish unit. All patched surfaces from new to existing shall provide a smooth and even transitions aligning with the adjacent surface with no visible marks, joints, seams, sheen, texture or color difference.
- H. Where new construction is to join with or match existing work, it shall be finished exactly to that work so as to form a complete unified and finished element.
- I. Visual Requirements: Do not cut and patch operating elements or related components in a manner that would, in the Owner's Representative's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in

visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner, including by not limited to.

1. Repair and patch in areas where finishes have been visually disturbed by cutting and patching to the nearest intersections.
2. Processed concrete finishes
3. Firestopping
4. Acoustical ceilings
5. Flooring
6. Carpeting

3.05 Refer to the Following Attachment A.

Coring/Sawcutting Notification

END OF SECTION 01 73 00

CORING/SAWCUTTING NOTIFICATION

TITLE: _____

PROJECT#: _____ LOCATION: _____

TRACKING NUMBER:
(Provided by PO&M)

Spec #: _____ DATE: _____

TO:	COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 <u>Project Manager:</u> <u>Joseph.Cooper@lakecountyca.gov</u>	FROM:	
-----	---	-------	--

SCOPE:

HAS USA BEEN NOTIFIED?

☐

YES

☐

NO

When? _____

ARE ALL KNOWN UTILITIES

☐

By

☐

Whom? _____

MARKED? YES NO

LOCATION OF WORK SHOWN ON

☐☐

Purpose: _____

ATTACHED SITE PLANS? YES NO

DATE(S) CORING OR SAWCUTTING WILL TAKE PLACE:

Signed: _____

LAKE COUNTY USE ONLY

DATE RECEIVED:

WHO FROM OWNER WILL AUTHORIZE, SUPERVISE AND VERIFY? PHONE:

Utilities Verified by IOR? YES

☐ NO ☐

PO&M

Fire

Telecom

☐
☐

Occ. Safety Activities

☐ coordinated with:
Other (Itemize):

COMMENTS:

Owner Representative

PO&M:

Signed: DATE

AUTHORIZED:

COMPLETION DATE:

COMMENTS:

(Unknown Utilities Encountered,
Disruptions, Successes, Weather,
etc.)

SIGNED: _____

Copies to: Owner Consultants, Facilities Maintenance, Fire, Telecom, File, Others:

SECTION 01 74 00

CLEANING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Cleaning.
- B. Requirements for cleaning during progress of Work, at Substantial Completion of Work and at Acceptance of Work.
- C. Disposal of waste materials, debris and rubbish during construction.

1.02 RELATED SECTIONS

- A. General Conditions of the Contract: Cleanup.
- B. Additional Requirements: Cleaning for specific products or elements of Work are described in Specification Sections describing that Work.

PART II - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning agents and materials that will not create hazards to health or property and that will not damage surfaces.
- B. Use only those cleaning agents, materials and methods recommended by manufacturer of the material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning agent manufacturer.

2.02 EQUIPMENT

- A. Provide covered containers for deposit of waste materials, debris, and rubbish.
- B. Provide at each entry point to the Work, and at other areas as directed by Owner's Representative, a clean room sticky mat. Replace mats daily or as requested by Owner Representative.

PART III - EXECUTION

3.01 CLEANING

- A. Construction Cleaning: During Construction, maintain buildings, premises and property free from waste materials and rubbish. Dispose of such waste and debris at reasonable intervals off of Owner property.
 - 1. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.

2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to closing such spaces.
 - a. All horizontal surfaces above ceilings shall be cleaned prior to ceiling closure.
 3. After every concrete placement clean all wet concrete from all surfaces.
 - a. Interior and exterior
 4. Clean interior areas daily to provide suitable conditions for Work. Remove debris from areas of work on a daily basis at a minimum, or more often as required to provide suitable conditions for work.
 5. Broom clean with sweeping compound or HEPA Vacuum interior areas prior to start of surface finishing, and continue cleaning on an as needed basis.
 6. Control cleaning operations so that dust and other particles will not adhere to wet or newly coated surfaces.
 7. Provide a mat, as specified above, for project entrances and exits. Item to be of sufficient size to allow personnel exiting project site to clean debris and dust from shoes. Tracking dust and debris through working areas of the facility and/or related buildings is not acceptable.
 8. Any dust or debris tracked out of the construction site, either by foot traffic or by debris hauling vehicles shall be cleaned by the contractor. If the dirt or other debris is determined by the Owner's Representative to from the contractor's activities at the jobsite it shall be cleaned in a timely manner regardless of how far from the site it is.
- B. Conduct cleaning and disposal operations in compliance with Waste Management Program per 013900 and all applicable codes, ordinances, regulations, including antipollution laws.

3.02 SUBSTANTIAL COMPLETION CLEANING

- A. Execute a thorough cleaning prior to Substantial Completion review by Owner's Representative.
- B. At roof areas remove all unused materials and construction waste including but not limited to screws, nails, fasteners, sheet metal cuttings, scrapes, oil, grease and adhesive. Wash down roof horizontal and vertical surfaces. Clean out all debris at roof drains.
- C. Clean walkways, driveways and streets by thorough brooming and wash-down.
- D. Clear debris from storm drainage lines and ways, leaving site ready for stormy weather.
- E. Rake landscaped areas clean.
- F. Remove waste and surplus materials, rubbish and temporary construction facilities, utilities and controls.
- G. Disinfect containment and protection areas as directed by Owner Representative.

- H. For Airborne Contamination areas: Construction cleaning use wet cleaning methods and HEPA-filtered vacuum cleaners are required to minimize release of airborne contaminants. Contain waste materials, debris and rubbish.

3.03 FINAL COMPLETION CLEANING

- A. Complete final cleaning before submitting final Application for Payment.
- B. Employ professional building cleaners to thoroughly clean building immediately prior to final inspection.
- C. Remove the following but not limited to concrete splatters, paint splatters, pencil marks, pen marks, chalkline marks, tape, protective films & coatings, grease, mastic, adhesives,

dust, dirt, stains, fingerprints, labels, and other foreign materials from all sight-exposed interior and exterior surfaces.
- D. Restore damaged or marred surfaces.
- E. Remove dust from all horizontal surfaces not exposed to view, including light fixtures, ledges and fixture lenses.
- F. Clean and polish all glass, mirrors, and bright metal work. Clean and disinfect all plumbing fixtures.
- G. Damp wash all resilient flooring. Waxing of resilient flooring shall be done by the Owner.
- H. Thoroughly sweep all floors and vacuum all carpets.
- I. Cleaning of Work provided by Owner under separate contracts, will not be required except if soiled by construction activities under this Contract.
- J. Thoroughly clean and polish all resilient flooring, metal and plastic surfaces; remove labels and protective coatings.
- K. Replace filters and clean heating and ventilating equipment used for temporary heat and ventilation.
- L. Remove waste material or equipment that has been damaged, touch up and /or repair exposed areas; such repairs to be approved by Owner's Representative.
- M. Should final cleaning be inadequate, as determined by Owner's Representative, and Contractor fails to correct conditions, Owner's Representative may order thorough cleaning and deduct the cost from Final Payment.

3.04 FINAL COMPLETION SITE CLEANING

- A. Broom clean exterior paved surfaces. Rake clean other surfaces of the grounds.
- B. Power Wash, Hose down and scrub where necessary all concrete and walks dirtied as a result of the construction work. Thoroughly remove mortar droppings from all walks and pavements.
- C. Remove from the site all tools, equipment, construction waste, unused materials, excess earth, and all debris resulting from the Work.

3.05 DISPOSAL

- A. Conduct cleaning and disposal operations in compliance with all applicable codes, ordinances, regulations, including anti-pollution laws.
- B. Do not bury or burn rubbish or waste material on Owner premises.
- C. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
- D. Remove waste materials, debris, and rubbish from site and dispose of off-site.

3.06 INSPECTION

- A. Prior to Beneficial Occupancy, Substantial Completion or Final Completion; Contractor and Owner's Representative shall jointly conduct an inspection of sight-exposed interior and exterior surfaces to verify that entire Work is clean.

END OF SECTION 01 74 00

SECTION 01 75 00

STARTING AND ADJUSTING SYSTEMS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Starting Systems

1.02 RELATED SECTIONS

- A. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES
- B. Section 018200 – DEMONSTRATION AND TRAINING
- C. Section 019100 - COMMISSIONING
- D. Division 22
- E. Division 23
- F. Division 25
- G. Division 26
- H. Division 27

1.03 SUBMITTAL REQUIREMENTS

- A. Submit preliminary schedule listing times and dates for start-up of each item of equipment in sequence in writing, minimum of ninety (90) calendar days prior to any start-up.
 - 1. Start up, testing and Commissioning of equipment shall be integrated and coordinated with the contract schedule.
 - a. Adjustments will be made as project progresses, but the sequencing will be maintained.
- B. Submit manufacturer's representative reports within one (1) week after start-up, listing satisfactory start-up dates.
- C. Provide information, manufacturer and model number of all testing equipment to be used and current certification that the testing equipment has been calibrated within the last 6 months.
- D. Maintain log with dates and results of Starting and Adjustments, and provide electronic copy to Owner's Representative.

1.04 PROJECT CONDITIONS

- A. Building enclosure shall be complete and weather-tight.
- B. Excess packing and shipping bolts shall be removed.
- C. Interdependent systems shall have been checked and made operational.
- D. Permanent Power is connected and operational to the building.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify Project conditions comply with requirements for start-up.
- B. Verify status of Work meets requirements for starting equipment and systems.

3.02 PREPARATION

- A. Coordination: Coordinate sequence for start-up of various item of equipment.
- B. Notification: Notify Owner in writing, minimum of fourteen (14) calendar days prior to startup of each item of equipment.
- C. Contractor Quality Assurance Manager shall take the lead role for Starting and Adjusting the equipment; coordinate and work with the Owner's Representative and Inspectors throughout the entire process.
 - 1. Coordinate all start-up with the Commissioning Agent for the project.
- D. Information on hand: Have Contract Documents, shop drawings, product data, and operation and maintenance data at hand during entire start-up process.
- E. Verify each piece of equipment is anchored correctly per the manufacturer's requirements and the Contract Documents prior to energizing or starting.
- F. Verify each piece of equipment is connected to the correct power source, the breaker and conductors are the correct size. Overcurrent protection in place and required shut offs adjacent to the equipment are in place.
- G. Verify each piece of equipment has been checked for proper lubrication, drive rotation, belt tension, control sequence, and other conditions that may cause damage prior to energizing or starting.
- H. Verify control systems are fully operational in automatic mode.
- I. Manufacturer's Criteria: Verify tests, meter readings and specific electrical characteristics agree with electrical equipment manufacturers' criteria.

- J. Bearings: Inspect for cleanliness: clean and remove foreign matter, verify alignment. Take corrective action as required.
- K. Drives: Inspect for tension on belt drives, adjustment of vari-pitch sheaves and drives, alignment, proper equipment speed, and cleanliness. Take corrective action as required. Verify shaft grounding protection is in place.
- L. Motors: Verify motor amperage agrees with nameplate value. Inspect for conditions that produce excessive current flow and that exist due to equipment malfunction. Take corrective action as required. Verify shaft grounding protection is in place.

3.03 STARTING SYSTEMS

- A. Execute start-up under supervision of responsible Contractor personnel.
- B. Place equipment in operation in proper sequence in accordance with sequencing schedule and the contract schedule.
- C. Follow manufacturer's requirements and recommendations for Starting and Adjusting, including any Owner requirements that may be listed in the Contract and Construction Documents.
- D. Equipment manufacturers representatives shall be on site for Starting and Adjusting that equipment.
- E. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- F. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- G. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

END OF SECTION 01 75 00

SECTION 01 76 00

PROTECTION of EXISTING and INSTALLED CONSTRUCTION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Protection for Products Including Owner Provided Products, After Installation.
- B. Protection of Existing Utilities, Interference and Underground Structures.
- C. Protection of Existing Structures and Work adjacent to new construction and demolition.

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 015100 – TEMPORARY UTILITIES

1.03 EXISTING UTILITIES

- A. Known Utilities: Known existing utilities are shown on Contract Drawings in approximate locations. Contractor shall exercise care in avoiding damage to existing facilities. Contractor shall be responsible for repair of same if damaged through Contractor's action. Hand excavation shall be utilized when digging in close proximity to existing utilities. Owner does not guarantee that all utilities or obstructions are shown, or that locations indicated are accurate.
- B. As part of the Contract Work the investigation and excavation to locate existing utilities and underground structures shall be as follows, Contractor shall assume the existing known utility is within a 5 feet zone on either side of the location indicated on the Contract Documents. If the existing known utility is not located within a 5 feet zone on either side of the location indicated on the Contract Documents, the Contractor shall immediately notify the Universities Representative. The Contractor shall continue excavating until the existing utility is located. The Contractor shall be compensated for any additional excavation beyond the 5 feet zone on either side of the existing utility per 1.03D.
- C. Electrical Equipment: No work shall be performed on energized electrical equipment unless scheduled with Owner's Representative. Owner reserves right to specify specific conditions for all work involving energized high voltage electrical equipment and its scheduled modification proposal.
- D. Uncovering Facilities: Prior to any earthwork for new construction, Contractor shall uncover all existing piping where crossings, interferences or connections are shown on Contract Drawings, from one (1) foot below proposed construction limit to the existing ground surface. Any variation in actual elevations and indicated elevations shall be brought to Owner's Representative attention. If Contractor does not expose all existing utilities, Contractor shall not be entitled to additional compensation for work necessary to avoid unknown interferences.

- E. Interferences: If interferences occur at locations other than general locations shown on Contract Drawings, and such utilities are damaged before such locations have been established, or create an interference, Contractor shall immediately notify Owner's Representative and a method for correcting said interference shall be supplied by Owner. Payment for additional work due to interferences not shown on Contract Drawings shall be in accordance with the General Conditions of the Contract. Cost of repair to damaged utilities shall be deducted from the Contract Sum.
- F. Accuracy of Drawings: Drawings showing location of equipment, piping, etc. are diagrammatic and job conditions will not always permit installations in locations shown. When a conflict situation occurs, immediately bring to attention of Owner's Representative for determination of relocation.
- G. Deviations from Drawings: Information shown relative to existing power and signal service is based upon available records and data but shall be regarded as approximate only. Minor deviations found necessary to conform with actual locations and conditions shall be made at no change to the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PROTECTION AFTER INSTALLATION

- A. Installed Equipment and Materials: Adequately protect all installed equipment and materials until completion and acceptance by Owner's Representative.
- B. Existing Facilities: All existing areas, improvements and facilities shall be protected from damage of any type resulting from operations, equipment or workers of Contractor during the construction process.
- C. Subsequent Operations: Protect installed products and control traffic in immediate area to prevent damage from subsequent operations.
- D. Traffic Areas: Provide protective coverings at walls, projections, corners, and jambs, sills, and soffits of openings in and adjacent to traffic areas.
- E. Elevators: Cover walls and floors of elevator cabs, and jambs of cab doors, when elevators are used by construction personnel. Protect the elevator call buttons, switches, communication devices, lights, thresholds and other components.
- F. Moisture and Humidity Protection: Protect all new installed work and existing work per the manufacturer's requirements from moisture or humidity damage including but not limited to stored materials, finishes, gypsum board, insulation, doors, casework, millwork, equipment and all other building components.
- G. Finished Floors: Protect finished floors and stairs from dirt, wear, and damage:
 - 1. Secure heavy sheet goods or similar protective materials in place, in areas subject to foot traffic.

2. At all transitions to adjacent areas not under construction.
3. Lay rigid materials in place in areas subject to movement of heavy objects and where storage of products will occur. H. Waterproofed and Roofed Surfaces:
 1. Restrict use of surfaces for traffic of any kind, and for storage of products.
 2. When an activity is mandatory, obtain recommendations for protection of surfaces from manufacturer. Install protection and remove on completion of activity. Restrict use of adjacent unprotected areas.
 3. No Construction work shall be conducted on any unprotected roof weather new or existing.
 4. All pathways to work on the roof shall be protected.
- I. Lawns and Landscaping: Restrict traffic of any kind across planted lawn and landscaped areas.
- J. Adjacent Facilities: Care shall be exercised to prevent damage to adjacent facilities including walks, curbs, and gutters. Adequate protection shall be placed where equipment will pass over such obstructions, and facilities damaged by construction operations shall be removed and replaced at Contractor's expense.

3.02 Protection of Existing Structure and Work adjacent to new construction and demolition.

- A. The Contractor shall protect existing in place work at the exterior and interior, including but not limited to finishes, materials, products, utilities, fixtures, and equipment adjacent to new construction and demolition. Any existing in place work at the exterior and interior that is damaged by the Contractor shall be repaired or replaced at no extra cost to the Owner.
- B. Overloading: Contractor shall be responsible for overloading any part or parts of structures beyond the calculated capacities of the design. Placing materials, equipment, tools, machinery, or any other item shall be done with care to avoid overloading. No loads shall be placed on floors or roofs before they have attained their permanent and safe strength.
- C. Damaged Work: All damaged work shall be replaced, repaired, and restored to its original condition without change to the Contract Sum. Repair or replace all damaged work promptly as directed by Owner's Representative.
- D. Damaged Utilities: Where existing utilities are damaged or disrupted on account of any act, omission, neglect, or misconduct of the Contractor in the manner or method of executing the Work, or due to non-execution of work, such damage shall be immediately repaired to maintain operation regardless of the time of occurrence.
- E. Temporary Construction: Provide temporary construction necessary for protection of building and its parts. Close in buildings as soon as possible to protect from weather and vandalism. Protect existing buildings and controlled temperature areas from damage.

- F. Doors and Casework: Protect doors, millwork and mill counters and cases and hardware from damage, including abrading and scratching of finishes. Protect doors and frames and hardware from mechanical damage and damage to anodic coatings.
- G. Protective Coatings: Remove protective coatings, etc., as required to leave work in condition for painting and finishing, final cleaning, etc.
- H. Exterior Work: Protect all exterior work, including existing asphalt paving and landscaping and buildings.

END OF SECTION 01 76 00

01 77 00 CLOSE OUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Substantial Completion procedures.
 - 2. Final Acceptance Procedures.
 - 3. Final cleaning.
 - 4. Repair of Work

1.3 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Substantial completion: Prior to Substantial Completion, complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion.
 - 1. Notify Owner's Representative that project is ready for inspection. Participate with Owner in conducting inspection.
 - 2. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 3. Submit closeout submittals, including project record documents, operation and maintenance manuals, damage or settlement surveys, as-builts, and similar final record information.
 - 4. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

1.4 FINAL COMPLETION PROCEDURES

- A. Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Notwithstanding the "Payment to Contractor" provisions set forth in the General Conditions, submit a final Application for Payment according to Section 012900 "Payment Procedures." No later than seven (7) days after work is complete, conduct a post-dredge survey. Submit to Owner for review and approval.
 2. Certified List of Incomplete Items: Submit certified copy of Owner's Representative Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owner's Representative. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit final inspection report.
 4. Submit final completion photographic documentation.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Owner's Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection Procedure: The Engineer will reinspect the Work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Engineer.
 2. Upon completion of reinspection, the Engineer will prepare a certificate of final acceptance, or advise the contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 3. If necessary, reinspection will be repeated.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list items applying to each space by major element.
 2. Submit list of incomplete items.

PART 2 - PRODUCTS (not applicable)

PART 3 – EXECUTION

3.1 FINAL CLEANING:

- A. Conduct cleaning and waste-removal operations.

1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

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

3.2 REPAIR OF WORK

A. Complete repair and restoration operations, before requesting inspection for determination of Substantial Completion.

END OF SECTION

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART I - GENERAL

1.01 SECTION INCLUDES A.

Equipment Data

- B. Operation and Maintenance Instructions
- C. Instruction of Owner personnel
- D. Schedule of Submittals
- E. Spare Parts and Maintenance Materials
- F. Guarantees, Warranties, Bonds, Service and Maintenance Contracts
- G. Project As-built Documents

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Administrative general requirements for submittals.
- D. Section 014500 – QUALITY CONTROL: Manufacturer's tests and inspections as a condition of warranty.
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 016100 – PRODUCT REQUIREMENTS
- G. Section 017700 – CLOSEOUT PROCEDURES

1.03 FILE FORMATS

- A. All printed documents submitted per this section shall be in PDF format
 - 1. The PDF files will be unlocked and searchable.
 - 2. All PDF documents will be bookmarked.
 - 3. The exception to electronic format for As-Built drawings will be noted in the specific specification section where they are required.
- B. Digital Photography
 - 1. All files will be submitted in JPEG

1.04 EQUIPMENT DATA AND OPERATION AND MAINTENANCE (O&M) INSTRUCTIONS

- A. Preparation of data shall be done by persons:
 - 1. Trained and experienced in maintenance and operation of described products.
 - 2. Familiar with requirements of this Section.
 - 3. Skilled in technical writing to extent required for communication of essential data.
 - 4. Skilled as drafters competent to prepare required drawings

- B. O&M Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at time of Section Submittals. Submit reviewed manual content formatted and organized as required by this Section. Prepare in the form of a data and instructional manual.

- C. Submit PDF electronic files of operation and maintenance manuals. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to the Owner. The exception to electronic format will be indicated in the specific specification section requiring hard copies of the manual.
 - 1. Name each indexed document file in composite electronic index with applicable item name. Include a completed electronically linked operation and maintenance directory.
 - a. List Project title and Project number and particular building as applicable.
 - b. Enable inserted reviewer comments on draft submittals.
 - 2. Organization: Arrange content by systems under Section numbers and sequence in accordance with the Project Specifications Table of Contents.

- D. Table of Contents, Each Volume: Provide title of Project, Project number, with names, addresses, and telephone numbers of Owner's Representative, as applicable, and Contractor, including name of contact person. Provide schedule of products and systems, indexed to content of the volume.
 - 1. For each Product or System: List names addresses and telephone numbers of subcontractor, original supplier and manufacturer, as applicable, including name of contact person. Include name and address of local source of supplies and replacement parts.
 - 2. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete information not applicable.
 - 3. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project As-Builts Documents as maintenance drawings.
 - 4. Additional Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in SECTION 014500 – QUALITY CONTROL.
 - 5. Warranties and Bonds: Include in each applicable section.

- E. Manual for Materials and Finishes:

1. Building Products, applied Materials, and Finishes: Provide PDF composite electronically indexed file. Include product data, with catalog number, size, composition, and color and texture designations. Provide information for reordering custom manufactured Products.
2. Instruction for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
3. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
4. Additional Requirements: As specified in individual Specification Sections.
5. Table of Contents: Provide PDF electronic file with links to individual sections.

F. Manual for Equipment and Systems

1. Record Instructions: Forward to Owner's Representative, upon completion of work, and before work will be considered for acceptance, complete PDF composite electronically indexed file of instructions of entire plant and component parts, including manufacturer's certificates, warranty slips, parts lists, descriptive brochures, and maintenance and operating instructions, in quantities set forth in various Divisions. Submit drafts for review before preparing final PDF electronic file.
2. O & M Instructions: Provide and install, where directed, printed sheet under clear plastic cover, giving concise operating and maintenance instruction for equipment.
3. Each Item of Equipment and Each System: Inclusive description of unit or system, Model Number, Serial Number, and component parts. Identify function, normal characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts. Best to include all information provided in final approved equipment submittal. Design drawing shall be updated to reflect what was actually provided.
4. Panelboard Circuit Directories: Provide electrical service characteristics, controls and communications.
5. Wiring Diagrams: Include color-coded wiring diagrams as installed.
6. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and any special operating instructions.
7. Maintenance Requirements: Include routine procedures and guide for troubleshooting; disassembly, repair, and re-assembly instructions; and alignment, adjusting, balancing, and checking instructions. Provide servicing and lubrication schedules, and list of lubricants required.
8. Instructions: Include manufacturer's printed operation and maintenance instructions. Include sequence of operation by controls manufacturer.
9. Parts Data: Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
10. Control Data: Provide as installed control diagrams by controls manufacturer.

11. Piping Data: Provide Contractor's coordination drawings, with color piping diagrams as installed. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
 12. Design Data: Provide a listing in table of Contents for design data, with tabbed binder divider page and space for insertion of data.
 13. Reports: Include test and balancing reports as specified.
 14. Additional Requirements: As specified in individual Specification Sections.
- G. Instruction of Owner's Personnel: Instruct Owner designated personnel to their full and complete understanding, procedures necessary to operate and maintain equipment and systems on continuing basis. Provide training of staff.
1. Schedule: Before final inspection, instruct Owner designated personnel in operation, adjustment, and maintenance of products, equipment, and systems, at agreed upon times. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
 2. Basis of Information: Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
 3. Instructional Material: Prepare and insert additional data in the manual when need for such data becomes apparent during instruction.
- H. Equipment Data and Operation and Maintenance Instructions Submittals:
1. Submittals: Comply with administrative requirements specified in SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
 2. Preliminary Draft O&M Submittal: Submit electronic files of each manual at least 90 calendar days before commencing demonstration and training. Owner's Representative will review draft and return with comments.
 - a. The comments or corrections shall be incorporated into the Final O&M submittal.
 - b. Correct or revise each manual to comply with the Owner's Representatives comments. Submit electronic copies of each corrected manual within 15 calendar days of receipt of Owner's Representative's comments.
 - c. Owner's Representative will notify the Contractor when the edits have been accepted for incorporation into the final O&M submittal.
 3. Advance Submittals: For equipment, or component parts of equipment to be put into service during construction and operated by Owner, submit documents within ten (10) calendar days after equipment approval.
 4. Final O&M Submittal: After completion of instruction of Owner operation and maintenance personnel and final inspection, revise content of documents to include additional information deemed necessary from instruction experience of Owner's personnel and any changes made during construction. Submit each manual in the final form prior to requesting inspection for Substantial Completion. The Owner's Representative will return comments electronically.

- a. Submit electronic copies of each manual prior to requesting training.

1.05 SPARE PARTS, EXTRA STOCK AND MAINTENANCE MATERIALS

- A. Products Required: Where called for in Contract Specifications, deliver to Owner's Representative, materials, etc., for use in maintenance work. Provide list of materials delivered to Owner's Representative, indicating date and acceptance by Owner's Representative.
 - 1. Provide quantities of products, spare parts, maintenance tools, and maintenance materials specified in individual Sections to be provided to Owner's Representative, in addition to that required for completion of the Work.
 - 2. Products supplied shall be identical to those installed in the Work. Include quantities in original purchase from supplier to avoid variations in manufacture.
 - 3. Provide itemized list of all spare parts, materials and transmittal to the Owner's Representative for acceptance.
- B. Storage, maintenance: Store products with products to be installed in the Work, as specified in SECTION 016100 – PRODUCT REQUIREMENTS: Product Storage and Protection.
- C. Delivery to site: Prior to final payment, deliver and unload spare products to project site. Coordinate with Owner's Representative and obtain receipt. Owner will handle and store products.

1.06 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 - 1. List of Documents: Include a table of contents for each O&M and emergency, operations listed per CSI Specification number.
 - 2. List of Systems and Subsystems: Include references to operation and maintenance manuals that contain information about each system.
 - 3. List of Equipment: List equipment for each system, organized by system. For pieces of equipment not part of system, list separately.
 - 4. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists,

assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."
 - 5. This Directory shall be submitted to the Owner's Representative for review and acceptance.

1.07 MAINTENANCE AGREEMENTS

- A. Prior to Closeout all Maintenance Agreements required by the Contract Documents shall be assembled and submitted electronically with the Closeout Submittal Requirements.
 - 1. Provide all Maintenance Agreements in PDF form.

a. Submit individual files for each Maintenance Agreement with a directory assembled by CSI division.

- 1) Combine all project Maintenance Agreements including the directory into one PDF for record.
- 2) Files will be formatted for printing with a footer identifying the CSI number and Owner's project number.
- 3) There will be a front cover to the file that contains all project information including the Contractor contact information.

1.08 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties. D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

1.09 WARRANTIES AND GUARANTEES

A. Warranties and Guarantees, general: Guarantees from subcontractors shall not limit Contractor's warranties and guarantees. Whenever possible, Contractor shall cause warranties of subcontractors to be made

directly to Owner. If such warranties are made to Contractor, Contractor shall assign such warranties to Owner prior to final payment. When equipment and products, or components thereof, bear a manufacturer's warranty or guarantee that extends the time period of Contractor's warranty or guarantee, so state in the warranty or guarantee.

1. Standard Product Warranties: Preprinted written warranties published by individual manufacturers for particular products and specifically endorsed by manufacturer to Owner.
 2. Special Warranties: Written warranties required by or incorporated in Contract Documents, to extend time limits provided by standard warranties or to provide greater rights for Owner.
 3. Provisions for Special Warranties: Refer to General Conditions of the Contract for terms of Contractor's special warranty of workmanship and materials.
 4. Specific Warranty Requirements: requirements are included in the individual Sections of Division 2 through 49 of the Contract Specifications, including content and limitations.
 5. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractor's requirement to countersign special warranties with Contractor.
 6. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.
 7. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to original warranty with an equitable adjustment for depreciation.
 8. Replacement Cost: On determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents. Contractor shall be responsible for cost of replacing or rebuilding defective work regardless of whether Owner has benefited from use of the work through part of its useful service life.
 9. Owner Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which Owner can enforce such other duties, obligations, rights, or remedies.
 10. Rejection of Warranties: Owner reserves right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
 11. Owner reserves right to refuse to accept work where a special warranty, or similar commitment is required, until evidence is presented that entities required to countersign commitments are willing to do so.
 12. When designated portion of Work is completed and occupied or used by separate agreement with Contractor during the construction period, submit properly executed warranties to Owner's Representative within fourteen (14) calendar days of completion of that designated portion of the Work.
 13. Submit written guarantees, in the form contained at end of this Section.
- B. Form of Warranty or Guarantee: All written warranties and guarantees, excepting manufacturers' standard printed warranties and guarantees, shall be submitted on Contractor's, subcontractor's, material supplier's, or manufacturer's own letterhead, addressed to Owner. Warranties and

guarantees shall be submitted in duplicate and complying with the form letter following. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved by Owner to suit the conditions pertaining to the warranty or guarantee. C. Submission requirements:

1. Contractor shall collect and assemble required warranties, guarantees, bonds, and service and maintenance contracts. Provide PDF electronically signed or signed and scanned copies of each. Organize documents into an orderly sequence based on the table of contents of the Project Manual CSI divisions.
2. Table of Contents: Provide PDF electric file with links to individual warranty sections. Include the following information.
 - a. Product or Work item.
 - b. Product or work suppliers firm name, address, telephone number and name of principal.
 - c. Scope of guarantee, bond, service or maintenance agreement.
 - d. Date of beginning of guarantee, bond, service or maintenance contract.
 - e. Duration of guarantee, bond, service or maintenance contract.
 - f. Contractor's name, address, telephone number and name of principal.
 - g. Provide information for Owner personnel:
 - 1) Proper procedure in case of failure.
 - 2) Circumstances that might affect validity of guarantee or bond.

D. Warranty Submittal

1. Provide all warranties in PDF composite electronically indexed files.
 - a. Submit individual files for each warranty with a directory assembled by CSI division.
 - 1) Combine all project warranties including the directory into one PDF for record
 - 2) Files will be formatted for printing with a footer identifying the CSI Number and Owner's Project Number.
 - 3) There will be a front cover to the file that contains the title "WARRANTY, GUARANTEE AND BOND" as well as all project information including the Contractor contact information. Title of Project and UC Davis Health Project Name and Number.
 - 4) Coordinate copies of each warranty to be included in operation and maintenance manuals.
 - 5) Final Submittal shall be incorporated into one PDF, bookmarked and searchable document.

F. Time of Submittals: Submit 60 calendar days prior to request for final payment. When work activity is delayed materially beyond date of Substantial Completion, provide updated submittal within ten (10) calendar days after Final Completion, listing date of Final Completion as the start of the Guarantee period.

1.10 AS-BUILT DOCUMENTS

A. Definitions:

1. The terms "As-Built Documents" or "As-builts" shall mean the marked-up version of the Contract Documents prepared by Contractor to record as-built conditions, changes, and selections made during construction.

B. Preparation of data shall be done by person(s):

1. Trained and experienced in the maintenance, preparation, and submittal of AsBuilt Documentation.
2. Familiar with requirements of this Section.

C. As-built Documents Content:

1. As-built Drawings and Specifications
2. As-built Schedule
3. Miscellaneous As-Built Submittals

D. As-Built Drawings and Specifications: Provide a complete set of As-Built Drawings and Specifications, showing and noting every change from the Contract Set, including but not limited to:

- Changes made in response to RFI's
- Amended Construction Documents (ACD) and related RFI's ☐ Change Orders/Field Orders and related RFI's.
- Architect's Supplemental Information (ASI) and related RFI's.
- Changes to locations, including access panels, windows, doors, plumbing, etc.
- Changes caused by obstructions and the obstructions notated
- Changes made in response to inspections
- Final dimensions
- Deferred Submittals (see "Miscellaneous As-Built Submittals" below)
- Shop Drawings (see "Miscellaneous As-Built Submittals" below)
- Final product selections

1. Format Requirements:

- a. Provide in PDF format with bookmarks. All annotations shall be neat and legible.
- b. File naming conventions:
 - 1) Drawings: YY_MMDD_Owner's Project Number_AsBuilt_Dwgs

- 2) Specifications: YY_MMDD_Owner's Project Number_As-Built_Spec
 - c. Provide text (preferably 1/4" or larger) on each drawing and on the cover of the specifications indicating the submission date, the Owner's Project Number, and the term "As-Builts". The text shall be the same size and general location on all sheets of the drawings and care should be taken to locate the text in a place as to not obscure text or linework on the drawings.
 - d. Bookmarks: Provide bookmarks in the following format:
 - 1) Drawings: Sheet Number – Sheet Name. Do not add additional categories or disciplines.
 - 2) Specifications: The first page of each section shall be bookmarked with: Section Number – Section Name.
 - Exception: If a hyperlinked Table of Contents is provided the bookmarks may be excluded.
 - e. Supplemental sheets: When adding a supplemental sheet containing sketches or other information that describe changes to the Contract Documents:
 - 1) Provide a two-digit numerical suffix that starts with .01 and ascends for every supplemental sheet:
Example: If the supplemental sheet contains sketches that describe changes to the hypothetical sheet "A1-01" the first supplemental sheet will be numbered "A1-01.01".
 - 2) The sheet name and number are to be similar in text size and location to the sheet being supplemented.
 - 3) Include supplemental sheets in bookmarks.
- E. As-Built Schedule: Provide As-Built schedule per SECTION 013200 CONTRACT SCHEDULES
1. Format Requirements:
 - a. Schedule to be in PDF format.
 - b. File naming conventions:
 - 1) YY_MMDD_Owner's Project Number_As-Built_Schedule
- F. As-Built Shop drawings:
1. Format Requirements:
 - a. File naming convention for shop drawings:
 - 1) YY_MMDD_Owner's Project Number_ShopDwg_Spec Section Number
- G. As-built Documents Submittal: Submit all As-Built Documents together after Final Completion and in accordance with SECTION 017700 CLOSEOUT PROCEDURES. Allow 10 business days for initial review and for each resubmittal.

1.11 AS-BUILT PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
1. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
2. Format: Submit Product Data as annotated PDF electronic file Include As-Built Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.
- 3.

1.12 PHOTOGRAPHS

A. General: Prior to Closeout all photographic documentation required per 013220 Construction Progress Reporting shall be assembled and submitted with the Closeout Submittal Requirements.

1.13 CONSENT OF SURETY AND FINAL CERTIFICATES

A. General: Prior to closeout Consent of Surety and Final Certificates required by the Contract Documents shall be assembled and submitted with the Closeout Submittal Requirements.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Guarantee
- B. Report of Work Required by Warranty

END OF SECTION 017800

GUARANTEE

Project Title: _____

Project Location: _____

Project Number: _____ DATE: _____

GUARANTEE FOR _____ (the "Contract"),

(Specification SECTION and
Contract No.) between The County of Lake ("Owner") and_____
("Contractor").

(Name of Contractor or Subcontractor)

hereby guarantees to Owner that the portion of the Work described as follows:

which it has provided for the above referenced Project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specification SECTION _____ and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____ months after the date of the guarantee the undersigned receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize Owner to undertake such correction, repair, or replacement at the expense of the undersigned; and Contractor will pay to Owner promptly upon demand all costs and expenses incurred by Owner in connection therewith.

SUBCONTRACTOR

Signed: _____ Title: _____

Typed Name: _____

Name of Firm: _____

Contractor License Classification & Number: _____

Address: _____

Telephone Number: _____

CONTRACTOR

Signed: _____ Title: _____

Typed Name: _____

Name of Firm: _____

Contractor License Classification & Number: _____

Address: _____

Telephone Number: _____

REPORT OF WORK REQUIRED BY WARRANTY

To:	Joseph Cooper, Owner Representative
From:	

On the date noted, the Owner identified the following work required under warranty:

Prepared by:

_____	_____	_____
(Print Name)	Signature	Date

In accordance with the terms and conditions of the Contract, the **Contractor** has agreed that, if at any time within _____ months after _____ the date of the guarantee the **Contractor** receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the **Contractor** will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

Prompt notification to be provided by the Owner Representative to the appropriate **Contractor**.

SECTION 01 82 00

DEMONSTRATION AND TRAINING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Demonstration of Equipment Operation and Instruction of Owner Personnel.

1.02 RELATED SECTIONS

- A. Section 017800 – CLOSEOUT SUBMITTALS
- B. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES

1.03 SUBMITTALS

- A. Submit preliminary schedule for Owner Representative approval, listing times and dates for demonstration of each item of equipment and each system, in writing, minimum of thirty (30) calendar days prior to activities.
- B. Submit reports and videos within (14) calendar days after completion of demonstrations and instructions. Give time and date of each training session, and hours devoted to training with a list of persons present and the corresponding video.

1.04 QUALITY ASSURANCE

- A. Equipment installed under Contract shall operate quietly and free of vibration. Adjust, repair, balance properly, or replace equipment producing objectionable noise or vibration in occupied areas of building. Provide additional brackets, bracing, etc., to prevent such noise or vibration. Systems shall operate without humming, surging or rapid cycling.
- B. Owner will provide list of personnel to receive instructions and will coordinate their attendance at agreed-upon time.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PREPARATION

- A. Verify equipment has been inspected, commissioned, and put into operation.
- B. Send approved pdf version of completed operation and maintenance manual 7 calendar days prior to training.

LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY

3.02 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of equipment and systems to Owner two (2) weeks prior to date of final inspection. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
- B. Use operation and maintenance manuals as basis of instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance. Display on a video screen and demonstrate the use of bookmarks and searches to find information being sought.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times, at equipment location.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

END OF SECTION 01 82 00

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DEMONSTRATION AND TRAINING

SECTION 01 91 00

COMMISSIONING

PART I - GENERAL

1.01 SUMMARY

- A. Commissioning (Cx) is the process of ensuring that all building systems are installed and perform interactively according to the design intent; those systems are efficient, cost effective and meet the Owner's Project Requirements and operational needs; that the installation is adequately documented; and that the operations staff are adequately trained. This is achieved by a full understanding of all building systems through construction, acceptance and warranty period with actual verification of performance. It also establishes testing and communication protocols in an effort to advance the building systems from installation to full dynamic operation and optimization.
- B. The Commissioning process does not relieve responsibility of the Contractor to provide a finished and fully functioning Project. The Contractor and Subcontractors provide the quality control for installation and start-up of the building systems.
- C. The specified commissioning activities shall demonstrate compliance with the Owner and California Code Commissioning requirements.
- D. Commissioning is a condition of the Contract and shall not be excluded from the base bid.
- E. Commissioning requirements extend to all alternates and change orders, as well as all subcontracts and purchase orders for work under the Contractor's control. F. Related Documents:
 - 1. Division 00 Procurement and Contracting Requirements, apply to this Section.
 - 2. Drawings and general provisions of Contract, and other Division 01 Specification Sections, apply to this Section.
 - 3. Technical Divisions of the Specifications apply to this Section.

1.02 DEFINITIONS

- A. Acceptance Phase: This is the phase of the project when the facility and its systems and equipment are inspected, tested, verified, and documented, and when most of the Functional Performance Testing (FPT) and final training occurs. This will generally occur after the Construction Phase is complete (i.e., start-up and checks have been accomplished). The Acceptance Phase typically begins with certification by the Contractor that the systems have been started in accordance with the approved protocols and the submission of the documentation of that start-up. The Acceptance Phase ends with the successful completion of all FPT and sign-off by the CA and the Owner.
- B. Action Item: Any issue that requires a response, completion, corrective or additional work, or any other action. Examples include a Request for Information (RFI), a work directive, a clarification request, a to-do item, an identified deficiency, or any other like item. Actions Items must be categorized as appropriate.

- C. Action List: This is a list that is maintained and updated by the CxA that includes all Action Items that relate to Cx activities.
- D. Commissioning (Cx): The process of ensuring that all building systems perform interactively according to the design intent and that the system operations are efficient and cost effective and meet the Owner's functional needs.
- E. Commissioning Agent (CxA): The individual retained by the Owner who will oversee the Cx process, develop and stipulate many of the Cx requirements (including FPTs), manage the Cx process, and ensure and verify that systems and equipment are installed, and tested to meet the Owner's requirements.
- F. Commissioning Coordinator (CC): The Contractor shall provide a Commissioning Coordinator. The CxA, the Owner's Representative and the CC will comprise a commissioning management team. While the CxA leads the overall commissioning process, the CC is responsible for managing contractors in their day-to-day performance of the specified commissioning work. The CC is an employee of the Contractor who is regularly and frequently on site. Qualifications for the Commissioning Coordinator include experience and excellent abilities to schedule, coordinate and manage subcontractors. The following tasks are some of the critical items included in the CC's scope of work:
 - 1. Integrating the specified commissioning activities into the overall contract construction schedule, updating the schedule and providing three-week lookahead schedules showing the upcoming commissioning related activities.
 - 2. Providing all commissioning submittals to the Owner's Representative and CxA.
 - a. O&M Manuals per Division 017700 Close-out Procedures and 017800 Close-out Submittals
 - 3. Coordinating Owner training and ensuring that training is provided in accordance with the Division 017700 Close-out Procedures and the technical specifications.
 - 4. Ensuring that subcontractor and supplier review and complete the CxA provided FPT procedures and forms then submitted in accordance with the specifications. This includes providing written comments (even if no exception is taken) regarding issues pertaining to safety, equipment protection/warranty and appropriateness of the procedure for the systems as provided from all required FPT participants for each FPT.
 - 5. Coordinating development and submittal of specified flushing, cleaning and startup procedures and ensuring that these procedures are completed, and documentation is submitted.
 - a. Providing test reports and progress reports in accordance with the 017800 Close-out Submittals, commissioning, and technical specifications.
 - 6. Managing the Contractor participation in the FTP process in accordance with the commissioning specifications.
 - 7. Managing the Contractor participation in resolution of issues identified during pre-commissioning meetings and during the commissioning process.
 - 8. Ensuring that subcontractors perform preliminary testing to verify readiness for final FPT demonstrations, submitting documented verification that systems will pass functional tests

with acceptable results as documented in the FPTs and coordinating the demonstration of the FPTs to the Owner and the CxA.

9. Coordinating repeat FPTs that fail due to contract deficiencies until acceptable results are achieved and managing the reimbursement of the Owner's costs for repeated tests in accordance with the commissioning specifications.
-
- G. Commissioning Plan: This is a detailed document prepared and maintained by the CxA that describes the entire commissioning process.
 - H. Commissioning Specifications (Cx specs): Includes the Cx specification section and Cx-related subsections of other specifications. All Contractor requirements relating to Cx.
 - I. Commissioning Team: The parties involved in the commissioning process for any given system. The Cx Team will include a core group involved with all systems. This core group will typically include the CxA, the Owner's Cx coordinator, and Contractor CC and/or MEP Coordinator. At any given point the team may include the project manager, members of the design team, the project inspector, product representatives, and operation and maintenance personnel.
 - J. Contractor: As used herein, Contractor is a general reference to the installing parties and can therefore refer to the Contractor, the subcontractors, or vendors as inferred by its usage.
 - K. Construction Phase: Phase of the project during which the facility is constructed and/or systems and equipment are installed and started. Contractor and subcontractors complete the installation complete start-up documentation, submit O&M information, establish trends, and perform other applicable requirements to get the systems started. The Construction Phase will generally end upon completed start-up and TAB of systems and equipment.
 - L. Contract Documents: The documents governing the responsibilities and relationships between the parties involved in the construction of the project including, but not necessarily limited to, the agreement/contract, construction plans and drawings, specifications, addenda, and change orders.
 - M. Deficiency: A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents.
 - N. Functional Completion: A milestone that marks the completion of the Acceptance Phase and successful documentation of the FPTs by the CxA.
 - O. Functional Performance Testing (FPT): This process verifies that the systems within the commissioning scope function in accordance with the Contract Documents, the Owner's design intent and the Design Team's Basis of Design. The process includes the documented testing of the systems under actual and simulated operating conditions. Functional Performance Test (FTP) procedures are detailed instructions that allow experienced system technicians to perform the FPTs with repeatable results. The repeatability of the procedures and results validate the tests. Final performance testing of systems will begin only after the Contractor certifies that such systems are completely installed and ready for functional testing and after the CxA has completed the subsequent installation verification process for the systems to be tested.
 - P. Installation Verification Process: This process includes the on-site review of related system components for conformance to the Contract Documents. Upon receipt of the completed Contractor's System Readiness Manual, the CxA will conduct this review and verify system readiness for final functional testing procedures. The CxA will document issues identified during this process and assign them to the appropriate party for resolution.

- Q. MEP Coordinator: Contractor's staff member who is responsible for all MEP equipment and system installation, coordination, and start-up is the primary contact for the Cx Agent and shall be responsible to organize and lead the start-up and commissioning meetings, tracks response to Action Items from Cx Agent and generate minutes.
- R. Ready to Commission statement: The subcontractor's written statement, through the System Readiness Checklist (SRC), that the equipment or system described has been completely installed, started, and tested to ensure that it has met all the requirements of the contract documents and is ready for commissioning.
- S. Start-up: Refers to the quality control process whereby the Contractor verifies the proper installation of a device or piece of equipment, executes the manufacturer's starting procedures, completes the start-up checklists, energizes the device, verifies it is in proper working order and ready for dynamic testing, and completes the start-up tests.
- T. System Readiness Checklists (SRCs): These checklists are provided by the CxA and include equipment installation and start-up items specified to be performed and verified by the Contractor. These checklists shall be compiled along with associated start-up forms by the Contractor to create the Contractor's System Readiness Plan. They shall be completed during installation and returned to the CxA as components of the Contractor's System Readiness Manual prior to the final CxA installation verification and functional performance testing process.
- U. System Readiness Manual: This document includes, for each system within the commissioning scope of work, completed and signed versions of each form submitted by the Contractor's.
- V. System Readiness Plan: This document shall be completed by the Contractor and submitted to the CxA prior to the final installation verification and functional performance testing process. By submitting these completed forms, the Contractor signals that the relevant systems are installed, operational and will meet functional testing acceptance criteria. The System Readiness Plan is compiled by the Contractor and includes, for each system within the commissioning scope of work, the System Readiness Checklists provided by the CxA, followed by the associated Contractor's Start-up and Test Forms. The Contractor System Readiness Plan shall be submitted to the CxA for review and approval prior to installation of the systems.

1.03 REFERENCES

- A. American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE):
 - 1. ASHRAE Guideline 0-2013, The Commissioning Process
 - 2. ASHRAE Guideline 1.1-2007, HVAC&R Technical Requirements for The Commissioning Process.
 - 3. ASHRAE Standard 202-2013, Commissioning Process for Buildings and Systems
- B. US Green Building Counsel (USGBC), Leadership in Energy and Engineering Design (LEED):
 - 1. Reference Guide for the version of LEED pursued by project.
- C. California Building Standards Code (California Code of Regulations, Title 24):
 - 1. Part 6, Building Energy Efficiency Standards for Residential and Nonresidential Buildings

2. Part 11, CALGreen

1.04 SYSTEMS TO BE COMMISSIONED

- A. All systems and equipment identified in the contract documents as having quality assurance or acceptance testing requirements are included in SYSTEMS TO BE COMMISSIONED by reference.
- B. All systems and equipment identified in the contract documents as requiring startup are included in SYSTEMS TO BE COMMISSIONED by reference.
- C. All systems and equipment identified in the contract documents requiring training are included in SYSTEMS TO BE COMMISSIONED by reference. D. Commissioning shall be system based.
 - 1. Equipment and sub-assemblies are to be installed, started, and tested as components of each respective system rather than as a category of equipment or by specification section.
- E. The systems to be commissioned shall include but are not limited to the following:
 - 1. Air Handling Units
 - 2. Exhaust Fans
 - 3. HTHW Heat Exchangers
 - 4. Pumps
 - 5. Fan Coils
 - 6. Terminal Devices (VAV boxes)
 - 7. Sump Pumps
 - 8. Air Transfer Fans
 - 9. Hot Water Heaters
 - 10. Building Control System - Direct Digital Control System
 - 11. Energy Management System
 - 12. Hydronic Systems
 - 13. Heat Exchangers
 - 14. Automated Lighting control systems
 - 15. Emergency generators
 - 16. Transfer switches
 - 17. Utility Meters and sub-metering system

18. VFDs
19. Power to Mechanical Systems
20. Lighting Inverter
21. Irrigation Systems
22. Solar Photovoltaic Power Systems
23. Domestic Hot Water Systems
24. VRF Systems
25. Radiant Heaters
26. Heat Recovery boxes
27. Irrigation systems
28. Renewable Energy Systems
29. Fire alarm / Fire Detection System.
30. Data Systems.
31. Audio/Visual Systems.
32. Intercom / Telecom Systems.
33. Miscellaneous Low Voltage Systems.
34. Other Systems as Specified.

1.05 CONSTRUCTION AND ACCEPTANCE PHASE COMMISSIONING

- A. The Contractor will be an active participant in the construction and acceptance phase commissioning activities. The commissioning tasks and responsibilities include following:
1. Respond to requests from the CxA for interpretation/clarification of equipment selection and sequence of operation during functional performance test development.
 2. Review, and provide direction as necessary on, the functional performance tests developed by the CxA for conformance with the design intent, within an agreed time interval.
 3. Supporting the commissioning process by diligently executing the contract requirements to provide a fully functional facility ready for testing and working closely with the commissioning team to integrate the commissioning process into the project delivery schedule.
 4. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.

5. Cooperate with the CxA for resolution of issues recorded during the commissioning process.
6. Schedule and attend commissioning kick-off meeting and commissioning coordination meetings.
7. Integrate and coordinate commissioning process activities with construction schedule.
8. Develop quality assurance process to verify and document proper installation, access, startup, adjusting, check out and maintenance of commissioned systems.
9. The CxA will develop the System Readiness Checklist (SRC) forms for each system within the commissioning scope of work. These forms summarize specific aspects of the installation of each system that the Contractor must verify prior to conducting functional performance testing. The SRC forms will be submitted to the Contractor and subcontractors for review and comments and subsequently compiled into the System Readiness Plan.

As part of the commissioning submittals, the Contractor shall submit a System Readiness Plan to the CxA. This document is typically a binder organized into sections with one section per system, each of which includes the SRC for that system followed by Manufacturer – or installation subcontractor-provided installation checklists, detailed start-up procedures, blank TAB forms and other project specific test forms. The CxA will review the System Readiness Plan and document any missing or erroneous forms. After the Contractor provides the correct forms, the CxA will provide final approval and acceptance of the System Readiness Plan for use by the Contractor and/or installation subcontractors. Once approved, the System Readiness Plan is subsequently referred to as the System Readiness Manual.

10. Review and accept commissioning functional performance test procedures provided by the CxA.
11. Ensure cooperation and participation of specialty subcontractors.
12. Provide to CxA a completed Functional Verification Checklist certifying that for all (listed) systems and equipment to be commissioned, that all systems, subsystems, equipment, and controls are ready for testing.
13. Ensure participation of major equipment manufacturers in appropriate training and testing activities.
14. Execution of the Functional Performance Test protocols for CxA to witness.
15. Manage every aspect of the training program including being responsible for all training requirements. An outline of the training requirements shall be developed with the Owner and CxA.
16. Responsible for developing and implementing a formal equipment maintenance program to ensure that all equipment specified to be installed on the project is received and maintained in good working order until accepted by the Owner.

1.06 SUBMITTALS

- A. The Contractor shall provide the CxA a list of required equipment/system submittals to the CxA. The CxA will identify submittals to be submitted to the CxA concurrent with submission to the Owner's Representative for review.
- B. The Contractor shall provide the CxA the requested submittals for the CxA concurrent review, with submission to the Owner for review
- C. One set of searchable and bookmarked electronic file of coordination drawings which includes all commissioned systems e.g., mechanical, electrical, fire protection, plumbing, and telecom.
- D. Names of Contractor and subcontractor's personnel who will be responsible for the startup and commissioning of the facility. To include names, email, and telephone contact information.
- E. Start-up and commissioning schedule. To include detailed plan of the sequence of construction with start and completion dates for each phase.
- F. Start-up forms for equipment and systems installed in the building. Documents to be used by sub-contractors to ensure that the building complies with the requirements of the contract documents.
- G. All Subs, through the Contractor, shall submit required installation, start-up, and preventive maintenance equipment data sheets to the CxA within 45 calendar days of equipment acceptance by the Owner.
- H. All Subs, through the Contractor, shall submit initial O&M data for system and equipment being commissioned under this specification. Initial O&M data shall be submitted within 45 calendar days of equipment acceptance by the Owner, but no less than 8 weeks prior to the beginning of functional testing.
- I. The Contractor shall submit an electronic copy of the construction meeting minutes, updated construction schedule, RFI log, and Bulletin log to the CxA within seven (7) calendar days of each meeting or update.
- J. Contractor shall submit an electronic copy of training plan and training materials to the CxA for review and approval prior to providing training.
- K. Consolidated close out list with all training, Final O&M manuals, As-Built documentation and surplus stock listed by spec section. Information to be compiled from the specifications.

PART II - PRODUCTS

2.01 TEST EQUIPMENT

- A. The Contractor shall supply all personnel and equipment for the demonstration and testing, including, but not limited to, tools, instruments, ladders, lifts, computers, software, cables, etc. Contractor supplied personnel must be competent with and knowledgeable of all project-specific systems, and automation hardware and software. All training documentation, O&Ms, and submittals shall be at the job site before functional testing commences.
- B. All standard testing equipment required to perform startup and initial checkout and required functional performance testing shall be provided by the division contractor for the equipment being

tested. For example, the mechanical contractor of Division 23 shall ultimately be responsible for all standard testing equipment for the HVAC system and control systems in Division 23.

- C. Special equipment, tools and instruments (only available from vendor/Subs, specific to a piece of equipment) required for testing equipment, according to these Contract Documents shall be provided by the Contractor and left on site, for the CxA to use during functional testing, seasonal testing, and deferred testing. The equipment, tools, and instruments will be returned to the vendor/Subs after successful conclusion of the commissioning effort.
- D. The controls contractor shall provide the CxA with temporary software license to be loaded on the CxA's computer, and any necessary network connection cables, for accessing the direct digital control system field panels for system testing. The controls contractor shall also provide a palm device (if applicable) with attachments, software, and cables, to check setpoint values of terminal device controllers. The controls contractor shall provide the CxA with log on ID, password, and LAN IP connection criteria for remote connection to direct digital control system. All the software, cables, and modems provided to the CxA will be returned at the successful conclusion of the commissioning effort.
- E. All testing equipment used by the contractors shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Contract Document Specifications (Project Manual). If not otherwise noted, the following minimum requirements apply to test and measurement equipment: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.1°F and a resolution of $+ \text{ or } - 0.1^{\circ}\text{F}$. Pressure sensors shall have an accuracy of $+ \text{ or } - 2.0\%$ of the value range being measured (not full range of meter) and have been calibrated within the last year. All equipment shall be calibrated according to the manufacturer's recommended intervals. Calibration tags shall be affixed or certificates readily available.

PART III - EXECUTION

3.01 AFTER AWARD OF CONTRACT

- A. The Contractor shall identify the person on their staff who will serve as the Commissioning Coordinator (CC). This person shall be responsible for all startup and commissioning issues on the project. Specific duties are identified in Part 1 of this Section.
- B. Within the first 30 calendar days of the project the Contractor shall meet with the Owner and the commissioning agent to discuss the process to be used on the project for managing communication to and from the Cx agent. This is to include the means for communication issues, commissioning reviews, processing submittals, RFIs, change orders, etc., meeting minutes, schedule information, Cx agent observations, and the action item lists. If a mutually agreeable process cannot be agreed upon, the Cx agent's process and software tools will be utilized.
- C. Within the first 60 days of the project there will be a meeting of the GC, the Cx agent and the key subcontractor's personnel to review how the Cx process will be implemented on the project and how the communication and documentation requirements will be met. The subcontractors are expected to send the staff that will be participating in the start-up and commissioning meetings.
- D. The Contractor will submit a schedule listing the key startup and Cx activities. The initial schedule can be general in nature. As the project progresses, the details on the schedule must be sufficient to list the activities of each Contractor for each phase of the project and what work must be accomplished before each listed task.

- E. The Contractor is to identify the team members from each subcontractor who will be participating in the start-up and commissioning meetings. This list is to include the name and contact information for the subcontractor's commissioning coordinator.
- F. The Contractor is to compile a listing of all factory tests that will take place prior to the start of the start-up and commissioning meetings. The consolidated list, along with an approximation of when they are expected to take place, shall be forwarded to the Cx agent.

3.02 Cx MEETINGS

- A. Eight weeks prior to supplying potable water to the building or the permanent power, the Commissioning Coordinator (CC) will schedule the first start-up and commissioning meeting. The meetings will not be concurrent with the Contractor's MEP coordination meeting and are to be scheduled at a mutually agreeable time between the Contractor, the Cx agent, and the Owner.
- B. The meetings will initially be held every second or third week as appropriate, and then increase in frequency to weekly as the bulk of the start-up and commissioning work is taking place.
- C. During each meeting an updated start-up and commissioning schedule will be distributed. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- D. During the meetings a consolidated training, O&M, and attic stock list drawn from the contract document requirements will be distributed. Decisions on the O&M review, when the training will take place, and how the stock will be turned over the Owner will be made based on this document. In addition to the hard copies distributed at the meeting, an electronic version shall be forwarded to the Cx agent and the Owner.
- E. Minutes of the start-up and commissioning meetings will be generated and distributed by the Commissioning Coordinator (CC). The minutes are to incorporate findings from the Cx agent. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- F. The updated FPTs will be provided to the Contractor by the Cx agent.
- G. The Contractor and the subcontractors will be required to coordinate their activities, and work collaboratively, with the test and balance contractor hired by the Owner.
- H. The Contractor will coordinate the schedules for two review meetings to be led by the Cx agent. The first will be a comprehensive test and balance review and needs to include the mechanical subcontractor's wet and dry side foreman. The second meeting will be a controls review. This meeting is to be attended by the controls subcontractor's lead on the project and the programmer. Each meeting is to last at least two hours.

3.03 FIELD START-UP AND TESTING

- A. The dates for all field start-up activities shall be listed on the start-up and commissioning schedule.

- B. The CxA works with the Subs in developing startup plans and startup documentation formats, including providing the Subs with pre-functional checklists to be completed, during the startup process.
- C. The TAB contractor submits their TAB plan, along with the TAB Plan Review Checklist, for approval by the CxA prior to starting TAB work.
- D. In general, the checkout and performance verification proceeds from simple to complex, from component level to equipment to systems and intersystem levels with pre-functional checklists being completed before functional testing.
- E. The CxA shall review shop drawings and material certifications, review of reports from independent testing agencies, independent on-site periodic construction observation and attendance of selected quality control-related meetings (e. g., Pre-installation Conferences).
- F. Pre-Functional Test Phase:
 - 1. The Contractor shall prepare the equipment and systems for start-up in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. Start-up shall be performed by the Contractor's and/or manufacturer's start-up technicians in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. The Contractor shall test the systems to verify that they perform in accordance with the Contract Documents, including the commissioning FPT procedures.
 - 2. The CxA will witness equipment start up and testing. The Contractor shall notify the CxA in writing at least fourteen (14) calendar days in advance of the start-up and testing dates so that the CxA can schedule attendance. If the CxA is not notified in advance of a scheduled start-up or testing activity, the start-up or testing shall be rescheduled and repeated to the satisfaction of the CxA. When scheduled start-up activities are not executed because of lack of preparation or coordination by the Contractor, the Contractor will be subject to back-charges in accordance with the Contract Documents.
 - 3. The Contractor shall complete and compile all start-up forms, test forms and SRCs for the System Readiness Manual and submit to the CxA.
 - 4. Upon receipt of the completed System Readiness Manual forms, the CxA will perform an Installation Verification by providing various inspections and backchecks of the completed System Readiness Manual forms. Issues notes during this process will be documented by the CxA in the Commissioning Issues Log.
 - 5. Upon acceptance of the System Readiness Manual, which includes the draft TAB report, functional performance testing shall be scheduled. Functional performance testing shall not commence until all critical issues identified during the Installation Verification process are resolved.
- G. Upon completion of the start-up and contractually required work, the Contractor shall submit a 'Ready to Commission' document to the Owner for the Specific Equipment and/or system that is complete. It is only after this document is received that the FPTs will commence.

3.04 Functional Performance Testing:

- A. Functional Performance Testing of commissioned systems shall begin after all critical issues discovered during the installation verification process have been corrected.
- B. The procedure for developing and performing the FPTs shall be as follows:
 1. The Contractor shall provide the equipment and commissioning submittals as specified in the Contract Documents.
 2. The Commissioning Authority will draft the FPT procedures based on the Contractor's submittals as approved by the Design Team. The draft procedures will be submitted to the Commissioning Team for review.
 3. Each Contractor and equipment supplier that is specified as an FPT participant in the FPT Summary Tables in the specifications shall participate in the development and performance of the associated FPTs. Each FPT participant shall provide written comments on the associated FPT procedures regarding each of the following issues:
 - a. Verify that the procedures can be performed without compromising the safety of the participants.
 - b. Verify that the procedures can be performed without compromising the warranties of equipment, components, and systems.
 - c. Verify that the procedures are appropriate for the equipment, components and systems as provided.
 4. The CxA will complete the working drafts of the FPT procedures.
 5. Subcontractors and suppliers shall provide the personnel, expertise and test equipment to operate and maintain the systems during testing.
 6. The Contractor shall test all systems within the commissioning scope of work, using the FPT procedures until the acceptable results specified in the FPT procedure are verified and documented. If necessary to obtain acceptable results, the Contractor may consult with the CxA to acquire clarification and resolve issues. The CxA will be available for on-site assistance of this nature.
 7. The Contractor shall submit documentation that verifies that the acceptable results specified in the FPT procedures have been verified and that they are ready to demonstrate the FPTs with acceptable results. Acceptable documentation consists of completed FPT record forms which document acceptable FPT results or indication on the Systems Readiness Checklists that the Contractor's pre-functional testing has verified that functional performance testing of the equipment and associated system demonstrate the acceptable results as specified.
 8. After the CxA has accepted the Contractor's documentation of acceptable results, the FPT shall be conducted and demonstrated to the CxA. If acceptable results are not demonstrated for an FPT, the Contractor shall resolve the issue(s) and the demonstration shall be repeated.
 9. The Contractor shall verify and document acceptable FPT results for all equipment components and systems. The FPTs may be demonstrated for a sample of the systems that

comply with all of the following criteria. This process is referred to in this document as "demonstration sampling".

- a. There shall be many of the systems with similar components that have identical sequences of operation which are implemented using identical control software programming.
 - b. The components and systems to be included in the Demonstration Samples will be chosen by the CxA at the time of demonstration.
 - c. The sample size will be in accordance with the Functional Performance Test (FPT) Demonstration Sampling Tables in the specifications.
 - d. Acceptable results must be demonstrated for the entire sample. If the FPT results are not acceptable due to a lack of preparation or coordination by the Contractor for any system or component sampled, the FPT shall be demonstrated for all the systems and components for which it was written. Whenever the demonstrated results are not acceptable, the Contractor shall make corrections and the FPT shall be demonstrated again. The cost of back-checking FPTs with unacceptable results is not included in the Commissioning Authority's scope of work. Back-charging applies to additional back-checking required due to lack of preparation by Contractor.
10. The CC is responsible for scheduling and coordinating functional testing activities. The Contractor shall demonstrate the FPTs after they have verified that performing the FPTs will yield the documented acceptable results. The Contractor is subject to back-charging, as specified herein, if acceptable results are not demonstrated because of work that should have been verified during predemonstration testing prior to the submittal of the System Readiness Manual. Acceptable results must be obtained during a single demonstration. No more than two delays of less than 15 minutes each are acceptable for each test.
- a. In addition to conducting the functional tests developed by the CxA, the Contractor shall be required to complete all start-up and testing procedures as specified elsewhere in the Contract Documents.
 - b. Where the CxA requires BMS trending, the CxA will provide a points list within the FPT form that may include both hardware (input/output) and software (virtual) points and appropriate trending intervals.
11. The Contractor shall provide trend data to the CxA in electronic format. As a Owner approved alternative, the Contractor can provide the CxA remote access to the BMS and provide training that will allow the CxA to directly download trend data.
12. The CxA will analyze and review the trend data and associated system performance.

3.05 Cx AGENT Functional Performance Testing (FPT)

- A. Upon receipt of the Ready to Cx statement, the Cx Agent will coordinate a time with the Contractor to witness the FPTs.

- B. The CxA develops specific equipment and system functional performance test procedures. The Contractor and manufacturer review the procedures to make sure the tests are safe for the equipment provided.
- C. The functional test procedures are executed by the Contractors, under the direction of, and documented by the CxA.
- D. The CxA will direct a TAB verification, with support from the TAB Contractor, to verify the values reported in the final TAB report.
- E. Items of non-compliance in material, installation or setup are corrected at the Sub's expense and the system retested.
- F. All deficiencies noted will be tracked via the CxA issues log. The Contractor will be responsible for obtaining sign-off of corrected items.
 - 1. The Contractor is responsible for scheduling and coordinating commissioning activities. The Contractor shall reimburse the Owner for the cost of commissioning activities that must be repeated because of a lack of preparation or coordination by the Contractor. Reimbursable costs include CxA fees for services billed at the CxA's standard hourly rate. Activities subject to backcharging include: Repeated back-checking: Commissioning issues are documented in the Commissioning Issues Log. The Contractor shall submit a brief written statement describing when and how each issue has been resolved, which shall be added to the Issues Log maintained by the CxA. The CxA will back-check these issues on a one-time-per-issue basis to verify they have been resolved. If the back-checked issues that have not been resolved as reported, the associated cost of the unsuccessful back-check shall be subject to backcharging.
 - 2. Repeated installation verification: Once the Contractor has submitted the completed System Readiness Manual forms, the CxA will perform final installation verifications on selected systems. Discrepancies discovered will be reported in the Commissioning Issues Log. Back-checking the correction of these discrepancies shall be subject to back-charging.
 - 3. Repeated witnessing of FPT demonstrations: As specified in this section, the Contractor demonstrates the functional performance tests after they have verified that performing the FPTs will yield the documented acceptable results. The cost of witnessing demonstrations that do not demonstrate specified acceptance criteria shall be subject to back-charging.

3.06 SAMPLING

- A. As noted in the specifications, multiple identical pieces of non-life-safety or otherwise non-critical equipment will be functionally tested using a sampling strategy. Significant application differences and significant sequence of operation differences in otherwise identical equipment invalidates their common identity. A small size or capacity difference, alone, does not constitute a difference. It is noted that no sampling by Subs is allowed in pre-functional checklist execution.
- B. Sampling strategy referenced in the Specifications as the "xx% Sampling—yy% Failure Rule" is defined by the following example:
 - 1. xx = the percent of the group of identical equipment to be included in each sample.

2. yy = the percent of the sample that if failing, will require another sample to be tested.

C. The example below describes a 20% Sampling—10% Failure Rule.

1. Randomly test at least 20% (xx) of each group of identical equipment. In no case test less than three units in each group. This 20%, or three, constitute the “first sample.” If 10% (yy) of the units in the first sample fail the functional performance tests, test another 20% of the group (the second sample).
2. If 10% of the units in the second sample fail, test all remaining units in the whole group. If at any point, frequent failures are occurring, and testing is becoming more troubleshooting than verification, the CxA may stop the testing and require the responsible Sub to perform and document a checkout of the remaining units, prior to continuing with functionally testing the remaining units.

3.07 FAILURE DUE TO MANUFACTURER DEFECT:

A. If 10%, or three, whichever is greater, of identical pieces (size alone does not constitute a difference) of equipment fail to perform to the Contract Documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the Contractor, the Owner, the A/E, or the CxA. In such case, the Contractor shall provide the Owner with the following:

1. Within one week of notification Contractor or manufacturer's representative shall examine all other identical units making a record of the findings. The findings shall be provided to the Owner within two weeks of the original notice.
2. Within two weeks of the original notification, the Contractor or manufacturer shall provide a signed and dated, written explanation of the problem, cause of failures, etc. and all proposed solutions which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation. The Owner will determine whether a replacement of all identical units or a repair is acceptable.
3. Two examples of the proposed solution will be installed by the Contractor and the PM will be allowed to test the installations for up to one week, upon which the Owner will decide whether to accept the solution. Upon acceptance, the Contractor and/or manufacturer shall replace or repair all identical items, at their expense and extend the warranty accordingly, if the original equipment warranty had begun. The replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

3.08 DEFERRED TESTING

A. Unforeseen Deferred Tests: If any check or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of checklists and functional testing may be delayed upon approval of the Owner, A/E, and CxA. These tests will be conducted in the same manner as the seasonal tests as soon as possible.

- B. Seasonal Testing: During the warranty period, seasonal testing shall be completed as part of this contract. Seasonal testing is intended to test the performance of systems under full load conditions that cannot be simulated during the functional testing period. For example, it is impossible to test the heating system under full load conditions in July, so the heating system would be full load tested during the winter months. The CxA shall coordinate this activity. Tests will be executed, documented, and deficiencies corrected by the appropriate Subs, with facilities staff and the CxA witnessing. Any final adjustments to the O&M manuals and As-Builts due to the testing will be made by the Contractor.

3.09 TRAINING OF OWNER PERSONNEL

- A. The Contractor shall be responsible for training coordination and scheduling and ultimately for ensuring that training is complete. The CxA will be responsible for overseeing and approving the adequacy of the training of Owner personnel for commissioned equipment.
1. Instructor capabilities shall be commensurate with level of instruction required. Instructor qualifications shall be submitted to Owner and CxA for review prior to training.
 2. The specific training requirements of Owner personnel by Subs and vendors as directed within the specifications.
 3. Each Sub and vendor responsible for training shall submit a written training plan to the CxA for review and approval prior to training. The plan shall include the following elements:
 - a. Equipment (included in training)
 - b. Intended audience
 - c. Location of training
 - d. Objectives
 - e. Subjects covered (description, duration of discussion, special methods, etc.)
 - f. Duration of training on each subject
 - g. Instructor name and qualifications for each subject
 - h. Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
 4. The CxA develops criteria for determining that the training was satisfactorily completed, including attending some of the training, etc. The CxA recommends approval of the training to the Owner.

3.10 COMMISSIONING ISSUES LOG:

- A. Issues identified during the commissioning process, including during site observations, pre-functional testing verification and functional testing, will be logged in the commissioning issues log. The CxA will maintain the master log. For each issue, the CxA will make a recommendation regarding who they believe is in the best position to provide the resolution. However, it is the Contractor's responsibility to manage issue resolution, including the determination of how the issue will be resolved and who will do the work.
- B. Each issue on the list will be classified with a "status" of either "resolved", "unresolved", or "resolved-unverified". "Resolved" issues are closed, having either been addressed by the Contractor and verified as corrected by the CxA or having been accepted by the Owner. "Resolved-unverified" issues have been reported as resolved by the Contractor but are not yet verified by the CxA as resolved. "Unresolved" issues have not been reported as addressed by the Contractor. Updated unresolved issues lists will be distributed to team in MS Word/Excel format.
- C. Material and method issues discovered during commissioning, but that pertain to Contractor construction shall be promptly reported to the A/E, CxA and the Owner's Representative.
- D. When a commissioning issue is resolved, the Contractor shall submit an updated list with a written response describing when and how the issue is resolved. The CxA or an applicable member of the Design Team shall then back-check the resolution of said issue. The CxA scope of work includes one back-check of issues that the Contractor reports as resolved. Back-charging applies to back-checking required due to lack of preparation of Contractor.

3.11 OPERATION AND MAINTENANCE MANUALS:

- A. The specific content and format requirements for the standard O&M manuals are detailed in Section 017800 Closeout Submittals. Special requirements for TAB contractor in appropriate Division 23 Sections and for the Controls contractor are found in appropriate Division 23 Sections. Electrical requirements are located in the appropriate Division 26 Sections. Refer to the specifications for additional O&M requirements.
 - 1. System Narrative. The Contractor shall include in the beginning of the O&M manuals a separate section describing the systems including:
 - a. A system narrative describing the type and function of the system.
 - b. Site information, including facility description and current requirements.
 - c. Simplified professionally drawn single line system diagrams on 8 ½" x 11" or 11" x 17" sheets. These shall include chilled water distribution system, water system, condenser water system, heating system, supply air systems, and exhaust systems and others as designated. These shall show major pieces of equipment such as pumps, heat exchangers, humidifiers, control valves, expansion tanks, coils, service valves, etc.
- B. CxA Review and Approval. Prior to material completion, the CxA shall review the O&M manuals, documentation and redline As-Built for systems that were commissioned and list other systems documentation that the CxA should review to verify compliance with the Specifications. The CxA will communicate deficiencies in the manuals to the Owner or A/E, as requested. Upon a successful review of the corrections, the CxA recommends approval and acceptance of these sections of the O&M manuals to the Owner or A/E. The CxA also reviews each equipment warranty and verifies

that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

3.12 CLOSE-OUT PROCESS

- A. All start-up documentation generated by the subcontractors shall be submitted to the Cx agent and the Owner in an electronic format.
- B. The sign-in sheets for all training sessions shall be submitted to the Cx agent and the Owner in electronic format.
- C. All training activities will be scheduled at mutually agreeable times between the Contractor, the Owner, and the Cx agent.

END OF SECTION 01 91 00

form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such Bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable Bond to the Owner.

23. ASSIGNMENTS

- 23.1 The Contractor shall not assign any interest in this Contract and shall not transfer any interest in the same without the prior written consent of the Owner, except that claims for money due or to become due the Contractor from the Owner under this Contract may be assigned by the Contractor to a bank, trust company, or other financial institution without such approval; written notice of any such transfer shall be furnished promptly to the Owner. Any attempt at assignment of rights under this Contract except for those specifically consented to by both parties or as stated above shall be void.

24. INDEMNIFICATION

- 24.1 CONTRACTOR shall indemnify and defend COUNTY and its officers, employees, and agents against and hold them harmless from any and all claims, losses, damages, and liability for damages, including attorney's fees and other costs of defense incurred by COUNTY, whether for damage to or loss of property, or injury to or death of person, including properties of COUNTY and injury to or death of COUNTY officials, employees or agents, arising out of, or alleged to arise out of, or connected with CONTRACTOR's operations hereunder or the performance of the work described herein, unless such damage, loss, injury or death is caused solely by the negligence of COUNTY.
- 24.2 In any and all claims against the Owner or the Engineer, or any of their agents or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may not be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' compensation acts, disability benefit acts or other employee benefits acts.
- 24.3 The obligation of the Contractor under this paragraph shall not extend to the liability of the Engineer, his agents or employees arising out of the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications.
- 24.4 If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled.

25. SEPARATE CONTRACTS

- 25.1 The Owner reserves the right to let other Contracts in connection with this Project. 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 WORK with theirs. If the proper execution or results of any part of the Contractor's Work depends upon the Work of any other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such Work that render it unsuitable for such proper execution and results.
- 25.2 The Owner may perform additional Work related to the Project by himself, or he may let other Contracts containing provisions similar to these. The Contractor will afford the other Contractors who are parties to such Contracts (or the Owner, if he is performing the additional Work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work and shall properly connect and coordinate his Work with theirs.
- 25.3 If the performance of additional Work by other Contractors or the Owner is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the Contractor prior to starting any such additional Work. If the Contractor believes that the performance of such additional Work

by the Owner or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING

- 26.1 The Contractor may utilize the services of specialty subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty Subcontractors.
- 26.2 The Contractor shall not award Work to subcontract(s), in excess of fifty percent (50%) of the Contract Price, without prior written approval of the Owner.
- 26.3 The Contractor shall be fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- 26.4 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the Work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.
- 26.5 Nothing contained in the Contract shall create any contractual relation between any subcontractor and the Owner.
- 26.6 The Contractor shall list on his Bid Proposal all subcontractors performing work or labor in an amount in excess of one-half of one percent (1/2 of 1%) of the total amount of Contractor's proposal. Listing of subcontractors is mandatory under Sections 4100-4113 of the California Public Contract Code.
- 26.7 Pursuant to the provisions in Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web site at: http://www.dir.ca.gov/dir/Labor_law/DLSE/Debar.html.
- 26.8 **PROMPT PROGRESS PAYMENTS TO SUBCONTRACTORS**
Attention is directed to the provisions in Sections 10262 and 10262.5 of the Public Contract Code and Section 7108.5 of the Business and Professions Code concerning prompt payment to subcontractors.

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 10 days from the receipt of each payment the prime contractor receives from County of Lake.

Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the County of Lake.

26.9 PROMPT PAYMENT OF WITHHELD FUNDS TO SUBCONTRACTOR

The prime contractor agrees further to release retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the County of Lake.

The Contractor shall return all moneys withheld in retention from the subcontractor as stated above, even if the other contract work is not completed and has not been accepted in conformance with Section 48 "Final Inspection", of these General Conditions. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or noncompliance by a subcontractor.

27. ENGINEER'S AUTHORITY

- 27.1 The Engineer shall act as the Owner's representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and Work performed. He shall interpret the intent of the Contract Documents in a fair and unbiased manner. The Engineer will make visits to the site and determine if the Work is proceeding in accordance with the Contract Documents.
- 27.2 The Contractor will be held strictly to the intent of the Contract Documents in regard to the quality of materials, workmanship and execution of the Work. Inspections may be made at the factory or fabrication plant of the source of material supply.
- 27.3 The Engineer will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.
- 27.4 The Engineer shall promptly make decisions relative to interpretation of the Contract Documents.

28. LAND AND RIGHTS OF WAY

- 28.1 Prior to issuance of Notice to Proceed, the Owner shall obtain all land and rights of way necessary for carrying out and for the completion of the Work to be performed pursuant to the Contract Documents, unless otherwise mutually agreed.
- 28.2 The Owner shall provide to the Contractor information which delineates and describes the lands owned and rights of way acquired.
- 28.3 The Contractor shall provide at his own expense and without liability to the Owner any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY

- 29.1 The Contract shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion. The Contractor warrants and guarantees for a period of one (1) year from the date of Substantial Completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other Work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

30. TAXES

- 30.1 The Contractor will pay all sales, consumer, use and other similar taxes required by the law of the place where the Work is performed.

31. QUANTITIES OF ESTIMATE

- 31.1 Wherever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents including the Proposal, they are given for use in comparing bids, and the right is especially reserved, except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the OWNER to complete the Work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims, liability for damage, or adjustment to Contract item bid price.

32. VERIFICATION AND WARRANTY

- 32.1 The Contractor shall determine the nature and location of the WORK, the general and local conditions, and all

other matters which can in any way affect the Work under this Contract. Failure to make an examination necessary for this determination shall not release the Contractor from the obligations of this Contract. The Contractor warrants that no oral agreement or conversation with any officer, agent, or employee of the Owner, or with the Engineer, either before or after the execution of this Contract, has affected or modified any of the terms or obligations herein contained.

33. DOCUMENTS TO BE KEPT ON THE JOB SITE

- 33.1 The Contractor shall keep one copy of the Contract Documents on the job site, in good order, available to the Engineer, his representatives and representatives of all agencies having jurisdiction over the Work.
- 33.2 The Contractor shall maintain on the job site, and make available to the Engineer on request, one current full-size marked-up set of the design drawings which accurately indicate all variations in the completed work that differ from the design information shown on the Plans. Said Plans shall show actual locations and elevations of all buried and concealed Work including piping, conduit, valves, stub outs and the like. Elevations shall be referenced to first floor finished elevation as datum. Locating dimensions shall be referenced to permanently fixed, accessible, and readily identifiable portions of building or site appurtenances by intersecting coordinate dimensions parallel to and at right angles to building lines.
- 33.3 Contractor shall provide and keep an up-to-date and complete record set of shop drawings. These prints shall be corrected daily and show every change from the approved shop drawings. This set of drawings shall be kept on the job site and shall be used only as a record set. This shall not be construed as authorization for the Contractor to make changes in the contract documents without written authorization. Contractor shall provide proof that the documents are being updated as noted above prior to issuing each payment request. Contractor's payment shall be contingent upon verification of documentation of as-built conditions.

34. ADDITIONAL CONTRACT DOCUMENTS

- 34.1 The Engineer will furnish to the Contractor, on request and free of charge, not more than 5 copies of the Contract Documents and 5 sets of full-size Plans. Additional copies of Contract Documents or Plans may be obtained on request by paying the actual cost of reproducing the Contract Documents or Plans.

35. NO PERSONAL LIABILITY OF PUBLIC OFFICIALS

- 35.1 In carrying out any of the provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

36. RECEPTION OF ENGINEER'S DIRECTIONS

- 36.1 The Superintendent, or other duly authorized representative of the Contractor, shall represent the Contractor in all matters given to him by the Engineer. Such directions of major importance will be confirmed in writing. Any directions will be so confirmed in each case on written request from the Contractor.

37. EMPLOYEES

- 37.1 The Contractor shall employ only competent subcontractors or skillful persons to do the work, and whenever any subcontractor or person shall appear to be incompetent or to act in a disorderly or improper manner, such person shall be removed from the Work and not again employed under this Contract. The Contractor shall not make any substitution for any subcontractor, person or entity previously selected unless the substitution is acceptable to the Owner.

38. REQUIREMENTS OF CALIFORNIA LAW FOR PUBLIC CONTRACTS

38.1 GENERAL

When the Contract Documents concern public works of the State or any county, municipality, or political subdivision created by its laws, the applicable statutes of the State of California shall apply including, but not limited to, the California Labor Code, Chapter I, Public Works. This contract shall also be subject to the

provisions of the Labor Compliance Program (if applicable).

38.2 USE OF APPRENTICES ON PUBLIC WORKS PROJECTS

Attention is directed to the provisions in Sections 1777.5 (Chapter 1411, Statutes of 1968) and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him.

Section 1777.5, as amended, requires the Contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval.

The ratio of work performed by apprentices to journeymen who shall be employed in the craft or trade on the public work may be the ratio stipulated in the apprenticeship standards under which the joint apprenticeship committee operates, but, except as otherwise provided in Section 1777.5, in no case shall the ratio be less than one hour of apprentices work for every five hours of labor performed by a journeyman. However, the minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeymen.

The joint apprenticeship committee shall have the discretion to grant a certificate, subject to the approval of the Administrator of Apprenticeship, exempting a contractor from the 1-to-5 ratio set forth in this section when it finds that any one of the following conditions is met:

- (a) Unemployment for the previous three-month period in the area exceeds an average of fifteen percent (15%).
- (b) The number of apprentices in training in such area exceeds a ratio of 1 to 5.
- (c) There is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth (1/30) of its journeymen annually through apprenticeship training, either on a statewide bases, or on a local basis.
- (d) Assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman.

A contractor to whom the contract is awarded, or any subcontractor under him or her, who, in performing any of the work under the contract, employs journeyman or apprentices in any apprenticeable craft or trade and who is not contributing to a fund or funds to administer and conduct the apprenticeship program in any craft or trade in the area of the site of the public work, to which fund or funds other contractors in the area of the site of the public work are contributing, shall contribute to the fund or funds in each craft or trade in which he or she employs journeymen or apprentices on the public work in the same amount or upon the same basis and in the same manner as the other contractors do, but where the trust fund administrators are unable to accept the funds, contractors not signatory to the trust agreement shall pay a like amount to the California Apprenticeship Council. The contractor or subcontractor may add the amount of the contributions in computing his or her bid for the contract. The Division of Labor Standards Enforcement is authorized to enforce the payment of the contributions to the fund or funds as set forth in Section 227.

The responsibility of compliance with this section for all apprenticeable occupations is with the prime contractor.

The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

The provisions of Section 1777.5 shall not apply to contracts of general contractors or to contracts of specialty contractors not bidding for work through a general or prime contractor, when the contract involves less than thirty thousand dollars (\$30,000) or twenty (20) working days.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards at its branch office.

38.3 LABOR DISCRIMINATION

Add the following subsection:

38.3.1 Attention is directed to the following "Nondiscrimination Clause" that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NONDISCRIMINATION CLAUSE

1. During the performance of this contract, contractor and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
2. This Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

**STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS
(GOV. CODE, SECTION 12990).**

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of \$5,000, or more.

1. As used in the specifications:
 - a. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;
 - b. "Minority" includes:
 - (i) Black (all persons having primary origins in any of the black racial groups of Africa, but not of Hispanic origin);
 - (ii) Hispanic (all persons of primary culture or origin in Mexico, Puerto Rico, Cuba, Central or South America or other Spanish derived culture or origin regardless of race);
 - (iii) Asian / Pacific Islander (all persons having primary origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); and
 - (iv) American Indian / Alaskan Native (all persons having primary origins in any of the original peoples of North America and who maintain culture identification through tribal affiliation or community recognition).
2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall physically include in each subcontract of \$5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.
3. The contractor shall implement the specific nondiscrimination standards provided in paragraph 6(a) through (e) of these specifications.
4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Government Code, Section 12990, or the regulations promulgated pursuant thereto.
5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees

- must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under Steps a. through e. below:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Provide written notification within seven days to the director of DFEH when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - c. Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the Contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen, etc., are aware of the Contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.
 - e. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out.
 7. Contractors are encouraged to participate in voluntary associations which assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's.
 8. The Contractor is required to provide equal employment opportunity for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) if a particular group is employed in a substantially disparate manner.
 9. Establishment and implementation of a bona fide affirmative action plan pursuant to Section 8104 (b) of this Chapter shall create a rebuttal presumption that a contractor is in compliance with the requirements of Section 12990 of the Government Code and its implementing regulations.
 10. The Contractor shall not use the nondiscrimination standards to discriminate against any person because of race, color, religion, sex, national origin, ancestry, physical handicap, medical condition, marital status or age over 40.
 11. The Contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code Section 12990.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing

subcontracts as may be imposed or ordered pursuant to Government Code Section 12990 and its implementing regulations by the awarding agency. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code Section 12990.

13. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

NOTE: Authority cited: Sections 12935(a) and 12990(d), Government Code. References: Section 12990, Government Code.

38.4 HOURS OF LABOR

Eight hours' labor constitutes a legal day's work. The Contractor shall forfeit, as penalty to the Owner, \$25 for each worker employed in the execution of the Contract, by him or by any subcontractor under him, for each calendar day during which any worker is required or permitted to labor more than 8 hours in violation of the provisions of the Labor Code and, in particular, Section 1810 to Section 1817 thereof, inclusive.

38.5 PREVAILING WAGE

The Contractor shall, as a penalty to the Owner, forfeit not more than fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing rates for the work or craft in which the worker is employed for any public work done under the contract by him or her or by any subcontractor under him or her. The amount of forfeiture shall be determined by the Labor Commissioner and shall be based on consideration of the contractor's mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages, or the previous record of the contractor in meeting his or her prevailing wage obligations, or a contractor's willful failure to pay the correct rates of prevailing wages. A mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages is not excusable if the contractor has knowledge of his or her obligations under this part. The difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the contractor.

The contractor shall pay each worker not less than prevailing wages on all public works projects, including maintenance work, exceeding \$1,000 in cost, in accordance with Section 1771 of the Labor Code. The contractor shall also pay travel and subsistence payments to all workers needed to execute the contract, in accordance with Section 1773.8 of the Labor Code.

The Owner will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wages set forth in the Contract Documents. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his Proposal, and will not under any circumstances be considered as a basis of a claim against the Owner on the Contract.

39. **SAFETY**

- 39.1 The Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during performance of the Work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U. S. Department of Labor (OSHA), the California Occupational Safety and Health Act, and all other applicable Federal, State, County, and local laws, ordinances, codes, the requirements set forth below, and any regulations that may be detailed in other parts of these Documents. Where any of these are in conflict, the more stringent

requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.

- 39.2 The Contractor shall appoint for the duration of this Contract, a qualified supervisory employee to develop and/or supervise a Contractor's job safety program that will effectively implement the safety provisions of the above agencies.
- 39.3 The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's safety supervisor, the safety program, or any safety measures taken in, on, or near the construction site.
- 39.4 The Contractor, as a part of his safety program, shall maintain at his office or other well-known place at the job site, safety equipment applicable to the Work as prescribed by the aforementioned authorities, all articles necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons (including employees) who may be injured on the job site.
- 39.5 If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Owner. In addition, the Contractor must promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the Work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- 39.6 If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.
- 39.7 When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, if the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe, and shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In accordance with Section 25914.1 of the Health and Safety Code, all such removal of asbestos or hazardous substances including any exploratory work to identify and determine the extent of such asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for such delay as provided in Section 8-1.09, "Right of Way Delays", of the Standard Specifications.

40. BEGINNING OF THE WORK

- 40.1 Before Work shall be started and materials ordered, the Contractor shall meet and consult with the Owner and/or Engineer relative to materials, equipment, right-of-way, schedules and all arrangements for prosecuting the Work.

41. SCHEDULES AND PROGRESS REPORTS

- 41.1 Prior to submittal of first partial payment request, the Contractor shall furnish the Engineer for his review, a schedule or schedules of expected progress of the Work under the Contract, showing approximately the dates on which each part or division of the Work is expected to be started and finished. The progress schedules shall be submitted regularly and shall cover a time period satisfactory to the Engineer. The Contractor shall also forward to the Engineer, with the request for progress payment each month, a summary report of the progress of the various parts of the Work under the Contract in the shops and in the field, stating the existing status, rate of progress, estimated time of completion, and cause of delay, if any. If the work is behind the submitted schedule, the Contractor shall submit in writing a plan acceptable to the Owner and Engineer for

bringing the work up to schedule.

42. CLAIMS

- 42.1 In any case where the Contractor deems additional compensation is due him for Work or materials not clearly covered in the Contract or by a Change Order, the Contractor shall provide written notice to the Engineer of such case at least 48 hours before he intends to begin the Work in question. If such notification is not given, then the Contractor hereby agrees to waive the claim for such extra compensation.

If the Engineer concurs that additional compensation is due the Contractor, a change will be issued as provided in Section 14.1. If not, the Contractor shall keep a record of the cost of the work in question, in accordance with the provisions of Section 14.1(c). Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. Claims for additional compensation shall be made in itemized detail and submitted, in writing, to the Owner and Engineer within 10 days following completion of that portion of the work for which the Contractor bases his claim. In case the claim is found to be just, it shall be allowed and paid for under a Change Order subsequently issued for the purpose.

- 42.2 Claims shall be litigated in a court of competent jurisdiction.
- 42.3 The Director of Public Works will make the final determination of any claims which remain in dispute after completion of claim review by the Engineer's authorized representative. A Claim Review Board, appointed by the Director of Public Works, will review such claims and make a written recommendation. The Contractor may meet with the Claims Review Board to make a presentation in support of such claims with the Engineer's authorized representative present.

43. CLEANING UP

- 43.1 The Contractor shall at all time, at his own expense, keep property on which work is in progress and the adjacent property free from accumulations of waste material or rubbish caused by employees or by the work and shall maintain material stockpiles in a neat, safe and orderly manner. Upon completion of the construction, the Contractor shall, at his own expense, remove all temporary structures, rubbish, and waste materials resulting from his operation. In the event that the Contractor does not properly clean up promptly, the Owner may separately contract to do so and withhold the cost from the Contractor.

44. NO WAIVER OF RIGHTS

- 44.1 Neither the inspection by the Owner, through the Engineer or any of his employees, nor any order by the OWNER for payment of money, nor any payment for, or acceptance of, the whole or any part of the Work by the Owner or Engineer, nor any extension of time, nor any possession taken by the Owner or its employees, shall operate as a waiver of any provision of this Contract, or any power herein reserved to the Owner, or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

45. ACCESS BY STATE AND LOCAL GOVERNMENT OFFICIALS

- 45.1 During construction, Contractor shall supervise, inspect and direct work competently and efficiently, devoting such attention thereto and applying such personal skills and expertise as may be required and necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.
- 45.2 Owner shall at their option, provide an Inspector and assistant Inspectors, if necessary, who shall act under the direction of the Engineer and the Owner as prescribed by law. Contractor in no way is relieved of any responsibility by the activities of Inspector.
- 45.3 Work shall be performed under the general observation and administration of Engineer. Contractor shall

immediately comply with orders and instructions given in accordance with terms of Contract by Engineer, or by any authorized assistant, inspector or other representative of Engineer acting within scope of duties entrusted, but nothing herein contained shall be taken to relieve Contractor of obligations or liabilities under Contract.

- 45.3.1 Engineer will provide administration of Contract and observation of the Work as hereinafter described.
- 45.3.2 Engineer will have authority to act on behalf of Owner only to extent provided in Contract Documents.
- 45.3.3 Engineer will visit site at intervals as agreed in the Owner / Engineer agreement. However, Engineer will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of Work. On basis of on-site observations, Engineer will keep Owner informed of progress of Work, and will endeavor to guard Owner against defects and deficiencies in Work of Contractor.
- 45.3.4 Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work.
- 45.3.5 Engineer will not be responsible for or have control or change over acts or omissions of Contractor, subcontractors, or any of their agents or employees, or any other persons performing Work.
- 45.3.6 Engineer will review Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with design concept of Work and with information given in Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay.
- 45.3.7 Engineer will conduct inspections to recommend dates of Substantial Completions and Final Acceptance, will receive and forward to Owner for their review, written warranties and related documents required by Contract and assembled by Contractor.
- 45.3.8 Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings and Specifications or otherwise) as Engineer may determine necessary, which shall be consistent with the intent of and reasonable inferable from the Contract Documents. Such written clarifications and interpretations will be binding on the Contractor, unless Owner in its discretion directs otherwise. If Contractor believes that a written clarification or interpretation justifies an adjustment in the Contract Sum or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, the Contractor may make a written claim therefore as provided herein.
- 45.3.9 Based on the observations, Engineer may disapprove or reject Work which Engineer believes to be defective, or that Engineer believes will not produce a complete Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer with consent of Owner, will also have authority to require special inspection or testing of Work, whether or not the work is fabricated, installed or completed.

46. FIRE PREVENTION AND PROTECTION

- 46.1 The Contractor shall perform all Work in a fire-safe manner. He shall supply and maintain, on the site, adequate fire fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable Federal, local and State fire prevention regulations and where the regulations do not cover, with applicable parts of the National Fire Prevention Standard for "Safeguarding Building Construction Operations", (NFPA No. 241).

47. STORAGE AND PROTECTION OF MATERIALS

- 47.1 Materials shall be so stored as to ensure the preservation of their quality and fitness for the Work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and they shall be placed under cover. Stored materials shall be located so as to facilitate prompt

inspection. Private property shall not be used for storage purposes without the written permission of the Owner or lessee.

- 47.2 Electrical equipment, devices, and motors shall be placed in dry and warm storage as approved by the Engineer.
- 47.3 All equipment and materials which are not to be painted (such as aluminum and stainless steel) and all factory finished or coated equipment and materials which are not to be painted, that are installed prior to completion of adjacent work, shall be completely covered and protected.

48. FINAL INSPECTION

- 48.1 Upon completion of all the Work under this Contract, and before the request for final payment is made, Contractor shall notify the Engineer in writing, and request a Final Inspection of the Work. This request shall include Contractor's certification that the Contract Documents have been reviewed, that the Project has been inspected for compliance and completed in accordance with the Contract Documents, that Work has been tested and is operational and the Project is completed, and ready for final inspection. The Contractor shall provide to the Engineer copies of Contractor's pre-final Inspection list of items that the Contractor completed prior to requesting the Final Inspection.

When the Work is deemed acceptable under the Contract Documents and the Contract fully performed, the Engineer will promptly record a Notice of Completion. Thirty-Five (35) days after the filing of said Notice of Completion the Engineer shall issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The final Certificate for Payment signed by the Engineer will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment have been fulfilled.

- 48.2 Upon completion of Final Inspection, the Engineer shall transmit in writing to the Contractor a list of items to be completed or corrected before the request for Final payment is made. This list shall be prepared by the Managing Engineer and may be in addition to any list previously prepared or cover any previous work reviewed by the Resident Engineer or Inspectors.
- 48.3 Warranties required by the Contract Documents shall commence on the date of recording of the Notice of Completion in the event that a Certificate of Substantial Completion has not been issued.

49. POSTING OF WAGE RATES

- 49.1 Attention is directed to Section 1735 of the Labor Code of the State of California. No discrimination shall be made in the employment of persons upon public works because of race, color, religion, ancestry, sex, or national origin. Every Contractor and Subcontractor for public works violating this Section is subject to all penalties imposed thereof.
- 49.2 APPRENTICES:
- 49.2.1 The Contractor and all subcontractors shall comply with the provision of Section 1777.5 of the California Labor Code regarding employment of apprentices and contributions of apprenticeship program.
- 49.3 WAGE RATES:
- 49.3.1 Pursuant to the provisions of Articles 1 and 2 of Chapter 1, Part 7, Division 2 of the Labor Code of the State of California, not less than the general prevailing rate of per diem wages for holiday and overtime work for each craft classification or type of worker needed to execute the Work contemplated under this Contract, as ascertained by the Owner, shall be paid by the Contractor and all subcontractors doing or contracting to do any part of said Work. Copies of said schedule of wage rates are available to any interested party on request.

The Contractor shall post a copy of the prevailing wage rates of per diem wages at the job site as determined by the County of Lake in a prominent place where it can be easily seen by the workers.

- 49.3.2 Employer payments other than those itemized in said schedule of wage rates, as defined in Section 1773.1 of the Labor Code, shall be paid in accordance with the terms of the collective bargaining agreement applicable to the type or classification of the worker or mechanic employed on the Work.
- 49.3.3 All wages paid, including payment for travel and subsistence payments to workers, shall comply with requirements of Section 1773.8 of the Labor Code.
- 49.3.4 Pursuant to Section 1777.5 of the Labor Code, each apprentice shall be paid in accordance with the terms of the collective bargaining agreement applicable to the trade or craft at which he is employed.
- 49.3.5 The Contractor shall forfeit as a penalty to the Owner the sum of twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing rate for such work or craft in which such worker is employed for any work done under the Contract by him or by any subcontractor under him. In addition, the difference between the stipulated prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor. The Contractor and each subcontractor shall keep an accurate record showing the name, occupation, and actual per diem wages paid to each worker employed on the Work contemplated by this Agreement, which record shall be kept open at all reasonable hours to the inspection of the Owner, and to the Division of Labor Law Enforcement. Said Owner shall have, at his election, all the remedies provided by Section 1775 of the Labor Code for the recovery of said penalty.
- 49.3.6 Claims and disputes pertaining to labor classifications shall be decided by the Owner unless local law provides otherwise. The Contractor shall diligently proceed with the Work pending settlement of any dispute which otherwise might delay completion.
- 49.3.7 The wages set forth are the minimum that may be paid by the Contractor. Nothing contained in the Contract Documents shall be construed as preventing the Contractor from paying more than the minimum rate.

50. OVERTIME WORK

- 50.1 Overtime and shift work may be established as a regular procedure by the Contractor and with the written permission of the Engineer. Such permission may be revoked at any time. No work other than overtime and shift work established as a regular procedure shall be done between the hours of 6:00 p.m. and 7:00 a.m., nor on Saturdays, Sundays or legal holidays, except such work as is necessary for the proper care and protection of the work already performed or except in case of an emergency.
- 50.2 All costs for overtime inspection, including those occurring as a result of overtime and shift work established as a regular procedure, shall be paid for by the Contractor. Overtime inspection shall include inspection required during holidays, Saturdays, Sundays, and any weekday between the hours of 6:00 p.m. and 7:00 a.m. Such costs will include, but will not necessarily be limited to, engineering, inspection, general supervision and other expenses which are directly chargeable to the overtime work. All such charges shall be deducted by the Owner from payments due the Contractor.

* * * END OF GENERAL CONDITIONS * * *

SUPPLEMENTARY GENERAL CONDITIONS

These supplementary general conditions add to, amplify, clarify, and in some cases revise the "General Conditions" as found in these Specifications. In the event of a discrepancy, these Supplementary General Conditions shall govern over the General Conditions.

The section numbers of these Supplementary General Conditions correspond to the section numbers of the General Conditions. The General Conditions are hereby revised by adding or amending the following sections:

SECTION 15: TIME FOR COMPLETION AND LIQUIDATED DAMAGES

Replace the following subsections:

15.5 Since Time is of the essence, the Contractor is anticipated to receive the Notice to Proceed (NTP) from the Owner between December 10, 2024 and December 17, 2024 and will be allowed to commence work under this contract immediately following the NTP and fully complete the work no later than April 17, 2026.

Add the following subsections:

15.5.1 The Contractor shall pay to the Owner for each and every day, including Saturdays, Sundays and legal holidays, that he shall be in default in completing the whole work to be done under contract time, the sum of one thousand (\$1,000.00) per day, which sums are by the execution of the Agreement mutually agreed upon as liquidated damages which the Owner will suffer by reason of such default. The owner shall have the right to deduct the amount of such damages from any monies due or to become due the Contractor under this Contract.

SECTION 38.2: USE OF APPRENTICES ON PUBLIC WORKS PROJECTS

Add the following provisions to the end of Section 38.2:

"A contractor's use of Lake County residents as apprentices on a County public works' project in accordance with Section 1777.5 of the California Labor Code may be included in the calculation to determine eligibility for a local work force discount but may not exceed the ratios provided in Section 1777.5.

On projects in excess of \$125,000, prior to commencement of work, the prime contractor shall submit a plan acceptable to the Owner which outlines how the apprenticeship requirements will be met by all contractors working on the project.

At any time during the term of the contract and for a period of 30 days thereafter, the prime contractor shall, within 5 days of request by the Owner, provide evidence of compliance with Section 1777.5.

SECTION 51: OCCUPANCY PRIOR TO COMPLETION

Add Section 51, "Occupancy prior to completion", as follows:

51.1 The Owner reserves the right to occupy, on written notice, any portion of the work at any time before completion while work is in progress. In the event of such occupancy, the Contractor shall provide, without additional cost to the Owner, suitable protection by means of fencing barriers, posted signs or other method as required to prevent persons

other than those directly connected with the work from entering remaining areas where continuing work is being conducted, vehicles are operating, or materials are stored.

51.11.1.1 The County's right to sequence Work in manner which would avoid disruption to the County's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities require by this Contract; the County's or any Inspector's enforcement of government act or regulation, or the provisions of the Contract Documents.

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Project information.
- 2. Work covered by Contract Documents.
- 3. Work by Owner.
- 4. Future work.
- 5. Owner-furnished products.
- 6. Access to site.
- 7. Coordination with occupants.
- 8. Work restrictions.
- 9. Specification and Drawing conventions.
- 10. Miscellaneous provisions.

1.3 PROJECT INFORMATION

- A. Project Identification: Lake County Sheriff's Administration Facility, Bid No. 250816.
 - 1. Project Location: 1431 Hoyt Avenue, Lakeport, CA 95453
- B. Owner: County of Lake, Public Services Department.
 - 1. Owner's Representative: Lars Ewing, Public Services Director, 333 Second Street, Lakeport CA 95453 (707) 262-1618.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
 - 1. The Project includes renovation of existing 1-story building originally constructed in 1994. Demolition scope of work includes removal of existing partition, finishes, root top mechanical equipment, electrical equipment. Plumbing fixtures and portion of existing parking stalls. Proposed scope of work includes adding a new second floor within existing structure, new building addition for elevator and supporting equipment room, seismic upgrade, fully automatic fire sprinkler system, new roof top mechanical equipment, new accessible public parking stalls, and secured parking lot. Approximately 20,323 SF on existing ground floor will include offices, breakroom briefing room,

weapons room, interview rooms, evidence room with support spaces, storage, restrooms, locker rooms, and corridors. A new second floor with 3,496 SF of space will provide future office expansion and circulation area.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

- A. Owner will contract for Testing & Inspections, Commissioning Agent, Geotechnical Engineer Observation & Inspections, IT/Telecom Equipment Installation before, during, and after project activities. Work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.6 CONTRACTOR-FURNISHED PRODUCTS

- A. Contractor shall furnish products indicated. The Work includes unloading, handling, storing, and protecting Contractor-furnished products as directed and turning them over to Owner at Project closeout.

1.7 WORK SEQUENCE

- A. The Contractor shall Coordinate the construction schedule and operations with Project Coordinator and Engineer.

1.8 ACCESS TO SITE

- A. General: Contractor shall have use of Project site for construction operations as indicated on Drawings and as indicated by requirements of this Section.
- B. Use of Site: Work will be conducted between 7:00 AM through 4:30 PM Monday through Friday except Holidays. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.9 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and adjacent buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.10 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public roads and highways and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: All work must be performed between 7:00 AM through 4:30 PM Monday through Friday except Holidays, unless otherwise agreed.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify County not less than ten days in advance of proposed utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 1. Notify County not less than two days in advance of proposed disruptive operations.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- B. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard.

1.12 PROJECT SCHEDULE

- A. The Owner will issue a "Notice of Award" letter to the Contractor after the Owner's regular Board meeting. The contract, certificate of insurance, and performance and payment bonds shall be returned/submitted no later than 10 days after receiving the contract for

signature.

- B. Within 10 days after receipt of the contract, certificate of insurance, and performance and payment bonds, the County will issue a Notice To Proceed.
- C. Work may begin on or after the date specified in the Notice To Proceed.

1.13 REGULATORY REQUIREMENTS

- A. Owner has contacted governing authorities and reviewed design requirements of local, state and federal agencies for applicability to Project and secured the following permits and agreements, or confirmation of no jurisdiction, which are included herein as exhibits or will be issued as Bid Addendums when completed:
 - 1. County of Lake, Sewer/Water Department (fees paid)
 - 2. County of Lake, Environmental Health Department (Permit-pending)
 - 3. Lakeport Fire District (Permit-pending)
 - 4. Lakeport School District (fees paid)
 - 5. County of Lake, Public Works Department (fees paid)
 - 6. Lake County Air Quality Management (Permit-pending)
 - 7. County of Lake, Community Development Department (Grading Permit-pending)
 - 8. County of Lake, Building Department (Permit-pending)

1.14 MISCELLANEOUS PROVISIONS

- A. WORKMANSHIP. All work shall be performed in a neat and professional manner using the best recognized practices of the particular trade involved and shall be accomplished by mechanics and workers skilled and trained to properly complete the work required. The work shall proceed vigorously to completion once it is started. Time is of the essence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 01 14 00

WORK RESTRICTIONS

PART I - GENERAL

1.01 WORK HOURS

- A. No Work shall be done outside of standard Monday through Friday 7:00 a.m. to 4:30 p.m. working hours, on holidays or weekends unless prior written approval has been retained from the University's Representative.

1.02 PROJECT PHASING (NOT USED)

1.03 WORK SEQUENCE and WORK RESTRICTIONS (NOT USED)

1.04 CONTRACTOR'S USE OF PROJECT SITE

- A. CONTRACTOR's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings.

1.05 OWNER OCCUPANCY (NOT USED)

1.06 SUBSTANTIAL COMPLETION

- A. Substantial Completion shall be applicable to the entire Work.

1.07 PROTECTION OF PERSONNEL

- A. County of Lake personnel and public visitors will be occupying parts of the adjacent buildings during the construction period. CONTRACTOR shall take proper precautions to ensure the safety of all persons during the construction period.

1.08 WORK SITE DECORUM

- A. Extreme care to limit noise shall be taken at all times that the building is occupied. Loud or unnecessary conversation shall be avoided. The playing of radios, or any audio devices shall be strictly prohibited. Noise, that in the sole opinion of the Owner's Representative, is disturbing or disruptive to occupants of the building and adjacent properties shall be scheduled for periods when the building is not occupied.
- B. CONTRACTOR shall control the conduct of its employees so as to prevent unwanted interaction initiated by CONTRACTOR's employees with County of Lake staff, or other individuals, adjacent to the Project site. Without limitation, unwanted interaction by CONTRACTOR's employees includes whistling at or initiating conversations with passersby. In the event that any CONTRACTOR's employee initiates such unwanted interaction, or utilizes profanity, CONTRACTOR shall, either upon request of Owner's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the Owner.

- C. SMOKE AND TOBACCO-FREE ENVIRONMENT: The Owner is committed to a healthy workplace culture and environment. The project site is a Smoke and Tobacco-Free environment. Smoking and the use of smokeless tobacco products (e.g., e-cigarettes and other unregulated nicotine products) is strictly prohibited. This policy is intended to provide a healthier, safer, and productive work environment.
- D. Alcoholic beverages are prohibited on the Owner's Project site.

1.09 INTERRUPTION OF BUILDING SERVICES

- A. Planned utility service shutdowns shall be accomplished during periods of minimum usage. In some cases, this will require Work activities before 8:00 a.m. and after 5:00 p.m. and weekend Work, at no additional cost to the Owner. At least 14 calendar days advance notice shall be given to the Owner's Representative before interruptions to utility service (refer to Utility Service Interruption/Shut Down Request) and other interferences with use of existing buildings, surrounding hardscape and roads.
- B. Shutdowns critical to the completion of the project shall be listed as Milestones on the project schedule. The CONTRACTOR shall program Work so that service will be restored in the minimum possible time and shall cooperate with the Owner in reducing shutdowns of utility systems.
- C. The Owner reserves the right to deny shutdown requests based on scheduled workload, research projects, and usage of surrounding buildings or other activities planned on campus.
- D. Owner's costs for initial planned utility service shutdowns shall be borne by the Owner. If repeat utility service shutdowns are required due to work necessary to correct CONTRACTOR's defective work, mistakes in new work layout such as misalignment or installation conflicts with other new work, Owner's costs for repeat shutdown(s) will be deducted from Contract Sum.

1.10 SITE INGRESS AND EGRESS

- A. Access to Project site shall be as indicated on the Drawings. Access to Project site is limited to designated routing on existing access roads. The CONTRACTOR and their employees, subcontractors, suppliers or delivery personal must stay on the designated roads and may not drive, ride or walk to other locations unless prior permission is provided in writing by the Owner's Representative.
- B. CONTRACTOR shall take all necessary precaution to ensure the safety of the bicyclists and pedestrians that use the campus roads.

- C. CONTRACTOR shall clean the site access and roads affected by the Work and shall maintain such in a dust free and safe and usable condition for motorists, bicyclists and pedestrians. During inclement weather CONTRACTOR shall closely monitor conditions to prevent slickness of roads.
- D. CONTRACTOR shall be permitted to block only 1/2 of a street at a time for momentary site access, unless specified otherwise. The street shall be operational and usable by the Owner at all times.

1.11 MOTOR VEHICLE AND BICYCLE TRAFFIC CONTROL

- A. CONTRACTOR shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. The CONTRACTOR shall provide a schedule of any activity that will impact traffic, or any planned lane or street closure, for approval by the Owner's Representative and shall give a minimum of 14 business days notice before closing any street or access.
- B. CONTRACTOR shall furnish at CONTRACTOR's expense all signage barricades, lights, and flaggers required to control traffic and shall provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for the protection of the public; and maintain, from the beginning of twilight through the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and Work.
- C. CONTRACTOR shall provide directional signs for use throughout the duration of the Project. The quantity shall be determined by the Owner's Representative and CONTRACTOR during a mandatory Pre-construction site meeting. CONTRACTOR shall prepare a mock-up of the sign for approval by the Owner's Representative.
- D. It is the responsibility of the CONTRACTOR performing Work on, or adjacent to, a roadway or highway to install and maintain such devices which are necessary to provide reasonably safe passage for the traveling public, including pedestrians and bicyclists, through the Work, as well as for the safeguard of workers. Before Work begins, a site meeting shall be held to discuss motor vehicle and bicycle traffic control plans for handling traffic through a construction or maintenance zone. Traffic control plans shall be submitted for review by the Owner's Representative and public agency or authority having jurisdiction over the roadway or highway. These traffic control plans shall be prepared by persons knowledgeable about the fundamental principals of temporary traffic controls and the work activities to be performed. The design, selection, and placement of traffic control devices for the traffic control plan shall be based on engineering judgment and in accordance with Part 6 of the California Manual on Uniform Traffic Control Devices for Streets and Highways.

- E. All metal plating and metal bridging shall be non-skid with waffle-patterns or right-angle undulations or shall be coated with a non-skid product. Plating shall be installed with no protruding edges or corners sticking up and with no bouncing or shifting.

PART II - PRODUCTS – Not applicable to this Section.

PART III - EXECUTION – Not applicable to this Section.

END OF SECTION 01 14 00

SECTION 01 22 00 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The bid items will be paid by Lump Sum Prices. They constitute all of the labor and costs for the completion of the work.
 - 1. No direct or separate payment will be made for providing miscellaneous temporary or accessory works and services, including but not limited to OWNER's and CONTRACTOR's field offices and sheds, surveys, job signs, sanitary requirements, testing, safety devices, submittals, record drawings, water supplies, dust controls, power, maintaining traffic, removal of CONTRACTOR generated waste, watchmen, security, bonds, insurance, cleanup, and all other conditions of the Contract Documents.
- B. All CONTRACTOR Health and Safety provisions to perform the work will be included in related bid items.
- C. Contractor quality control, record drawings, project meetings, and associated testing provisions during the progression of the work will be included in the related bid items.

1.2 RELATED DOCUMENTS

- A. Drawings and Technical Specification.

1.3 SUMMARY

- A. This Section specifies administrative and procedural requirements for lump sum, unit price, and contingency pay items.
 - 1. Bid prices shall be based on Lump Sums and include all necessary material, overhead, profit, and applicable taxes and permit fees.
 - 2. Refer to individual Technical Specifications sections for construction activities requiring the establishment of bid prices, as applicable.
 - 3. OWNER reserves the right to reject the CONTRACTOR's work-in-place until the work meets the requirements of the Drawings and Specifications.

SECTION 01 23 00

ALTERNATES

PART I - GENERAL

1.01 GENERAL

- A. This Section identifies each Alternate and describes basic changes to the Work only when that Alternative is made a part of the Work by specific provision in the Agreement.
- B. Lump Sum Base Bid and Alternates shall include costs of all supporting elements required, so that combination of Lump Sum Base Bid and any Alternates shall be complete. Scope of Work for all Alternates shall be in accordance with applicable Drawings and Specifications.
- C. Except as otherwise specifically provided by University, Work described in Alternates shall be completed with no increase in Contract Time.
- D. This Section includes only non-technical descriptions of the Alternates. Refer to Sections of Division 2 - 48 of the Specifications for technical descriptions of the Alternates.
- E. Coordinate related Work and modify surrounding Work as required to integrate Alternates into the Work properly and completely.

1.02 DESCRIPTION OF ALTERNATES

- A. ADD ALTERNATE #1: Elevator Maintenance Service Contract – 12 Months
- B. ADD ALTERNATE #2: Elevator Maintenance Service Contract – 60 Months
- C. ADD ALTERNATE #3: Solar / PV Parking Canopies (pending Bid Addendum – Appendice I)

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not applicable to this Section

END OF SECTION 01 23 00

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - A. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - A. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - B. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copy of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- A. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate

- c. Contractors that will be necessary to accommodate proposed substitution.
 - c. Provide a detailed side-by-side comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes, such as performance, size, weight, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviation, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of engineers and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- B. Owner's Action: If necessary, Owner will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Owner will notify Contractor through Project Coordinator of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Owner's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Owner does not issue a decision on use of a proposed substitution within time allocated.

1.5 Q
QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.
- B. Request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - 2. Will provide the same warranty for substitution as for specified product.
 - 3. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
 - 4. Waives claims for additional costs which may subsequently become apparent.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Owner or Engineer will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution provides sustainable design characteristics that specified product provided.
 - c. Substitution request is fully documented and properly submitted.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - f. Requested substitution is compatible with other portions of the Work.
 - g. Requested substitution has been coordinated with other portions of the Work.
 - h. Requested substitution provides specified warranty.

- i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed unless agreed upon by Owner and Engineer.
- C. Substitutions for Convenience: Owner will consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Owner.
- 1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.
 - j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 25 50

CLARIFICATION/INFORMATION PROCEDURES

PART I - GENERAL

1.01 DESCRIPTION

- A. This Section contains the procedures to be followed by Contractor for submitting a Request for Information (RFI) upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or Drawings or upon having any question concerning interpretation.
- B. Section Includes
 - 1. RFI Administrative requirements
 - 2. RFI Procedures
 - 3. RFI Execution

1.02 RELATED DOCUMENT SECTIONS

- A. Conditions of the Contract: Governing requirements for changes in the Work, in Contract Sum and Contract Time.
- B. Section 016100 – PRODUCT REQUIREMENTS: Product options, substitutions, omissions, and improper descriptions.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Description: Section provides procedure for Contractors to obtain interpretation or clarification of the Contract Documents, or identify apparent conflicts, omissions, or errors in the Contract Documents.
- B. Responsible Person for Contractor: Submit name of the individual authorized to receive Requests for Information documents, and who is responsible for forwarding Request.
- C. RFI Format: Submit all Requests for Information on the form attached at the back of this Section, or electronic and/or web-based construction administration software provided or accepted by the Owner.

1.04 RFI PROCEDURES

A. RFI Format, Numbering and Subject:

1. RFI Format: Submit all requests for clarification or additional information in writing to Owner's Representative using the RFI Request for Information form provided at the back of this Section or obtained from Owner's Representative.
2. RFI Numbering: Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix for resubmissions. For example, the first RFI is numbered "001". The second RFI is numbered "002" and so on. The first resubmittal of RFI "002" will be numbered "002a".
3. RFI Subject: Limit each RFI to one (1) subject only.

B. RFI Submittal conditions:

1. Discovery of unforeseen condition or circumstance not described in the Contract Documents.
2. Discovery of an apparent conflict, discrepancy, or inconsistency in or between portions of the Contract Documents.
3. Discovery of a situation, direction or apparent omission that cannot be reasonably inferred from the intent of the Contract Documents.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 EXECUTION OF RFI's

- ##### A.
- Email the Owner's Representative the RFIs. Emailed RFI requests received after normal business hours and/or received on non-normal workdays, as defined in Specification

Section 013100–COORDINATION, Item 1.07.F.4.A will begin notification time starting at 7:00 a.m. the following workday.

- B. Failure to provide proper information: RFIs will not be recognized or accepted if, in the opinion of Owner's Representative, one of the following conditions exist:
 - 1. Contractor submits the RFI as a request for substitution.
 - 2. Contractor submits the RFI as a Submittal.
 - 3. Contractor submits the RFI as a Contract Document discrepancy or omission without through review of the Documents (Capricious submission).
 - 4. Contractor submits the RFI assuming portions of the Contract Documents are excluded or by taking an isolated portion of the Contract Document in part rather than in whole.
 - 5. Contractor submits the RFI in an untimely manner without proper coordination and scheduling of Work of other Trades.
- C. Response Time: Request clarifications or information immediately upon discovery of need. Submit RFI's in a timely manner allowing full response time to avoid impacting Contract Schedule.
 - 1. Owner's Representative, whose decision will be final, shall resolve issues and respond to questions of Contractor , in most cases, within fourteen (14) calendar days. Actual time may be lengthened for complex issues, or shortened for expedited situations, as mutually agreed in writing.
 - 2. After submission of an RFI by Contractor and prior to receipt of the RFI response from Owner, the Contractor proceeds with effected Work at own risk. Any portion of the Work not constructed in accordance with Owner interpretation, clarification, instruction or decision is subject to removal and replacement at Contractor expense.
- D. Failure to Agree: In the event of failure to agree to the scope of the Contract requirements, Contractor shall follow procedures set forth in Article 4 of the General Conditions of the Contract.

3.02 Refer to the following Attachment

- A. Request for Information

END OF SECTION 01 25 00

REQUEST FOR INFORMATION

Project #: _____ **Project Title:** _____
RFI #: _____ **Date:** _____ **HCAI #:** _____

County of Lake Public Services 333 2 nd Street, Lakeport, CA 95453 Attn.: Capital Project Manager P: 707-262-1618 C: 707-245-6911 Email: Joseph.Cooper@lakecountyca.gov	From:	

SUBJECT: _____

SPEC SECTION/DRAWING #: _____ **PARA:** _____ **DETAIL:** _____
RM # _____ **GRID #** _____

TRANSMITTAL RECORD	Requestor to County PS	County PS to A/E	A/E to County PS	County PS to Requestor	Notes
Date Submitted					

INFORMATION NEEDED: _____

CONTRACTOR'S PROPOSED RESOLUTION: _____

REQUESTOR SIGNATURE: _____ **REPLY REQUIRED BY:** _____

☐ **ATTACHMENTS:** _____

REPLY: _____

REPONDER SIGNATURE: _____ **DATE:** _____

UNLESS OTHERWISE INDICATED ABOVE, THE REPLY TO THIS RFI IS NOT INTENDED TO BE A CHANGE DIRECTIVE. SHOULD THE CONTRACTOR, SUBCONTRACTOR, OR SUPPLIERS FEEL THAT THE REPLY WILL IMPACT THE PROJECT COST OR SCHEDULE; IT SHOULD IMMEDIATELY BE CONVEYED TO THE OWNER'S PROJECT MANAGER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

COPIES: ☐ COUNTY ☐ CONSULTANTS ☐ _____ ☐ _____ ☐ _____ ☐ FILE

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGERS IN THE WORK

- A. Owner will issue through Project Coordinator, supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Project Coordinator will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Project Coordinator are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 10 days, after receipt of Proposal Request, Contractor shall submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and

finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

e. Quotation Form: Use forms acceptable to Engineer.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner's Project Coordinator.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 7. Proposal Request Form: Use forms acceptable to Engineer.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Project Coordinator will issue a Change Order for signatures of Owner and Contractor.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Owner's Project Coordinator may issue a written Construction Change Directive authorizing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Within 10 days after the effective date of the Contract, submit a complete schedule of values of all lump sum bid items showing the value assigned to each part of the work.
 - 2. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule in sufficient detail to serve as the basis for progress payments during construction.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Arrange schedule of values consistent with format that is satisfactory to the Project Coordinator.
 - 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
 - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site.
 - 4. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 - 5. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.
 - 6. Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
 - 7. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling **five** percent of the Contract Sum and subcontract amount.

8. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and Project Coordinator, and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Project Coordinator by the 5th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
- D. Application Preparation: Complete every entry on the agreed to form. Execute by a person authorized to sign legal documents on behalf of Contractor. Project Coordinator will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit two signed original copies of each Application for Payment to Project Coordinator by a method ensuring prompt receipt. One copy shall include waivers of lien and similar attachments if required as well as notarization of the authorized signature, if required.
 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Products list (preliminary if not final).
 5. Sustainable design action plans, including preliminary project materials cost data.
 6. Schedule of unit prices.
 7. Submittal schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal consultants.
 10. Copies of building permits.
 11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 12. Initial progress report.
 13. Report of preconstruction conference.
 14. Certificates of insurance and insurance policies.
 15. Performance and payment bonds.
 16. Data needed to acquire Owner's insurance.
- H. Application for Payment at Substantial Completion: After Project Coordinator issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706.
 5. AIA Document G706A.
 6. AIA Document G707.
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00

COORDINATION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Project Meetings
- B. Submittals Requirements
- C. General **Contractor** Coordination
- D. Coordination of Subcontractor and Separate Contracts
- E. Owner Criteria

1.02 RELATED REQUIREMENTS

- A. Section 011100 – SUMMARY OF THE WORK: Description of Contract Documents.
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 014500 – QUALITY CONTROL
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 015100 – TEMPORARY UTILITIES
- G. Section 015200 – CONSTRUCTION FACILITIES
- H. Section 015500 – VEHICULAR ACCESS AND PARKING: Traffic Regulation.
- I. Section 015600 – TEMPORARY BARRIERS, ENCLOSURES AND CONTROLS
- J. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- K. Section 016100 – PRODUCT REQUIREMENTS
- L. Section 017300 – CUTTING AND PATCHING
- M. Section 017700 – CLOSEOUT PROCEDURES: Coordination of completion reviews, inspections, and submission of documents.

- N. Section 017800 – CLOSEOUT SUBMITTALS: As-Built Documents.
- O. Division 21 - Fire Protection Systems.
- P. Division 28 - Fire Alarm Systems

1.03 MEETINGS

- A. Pre-Construction/Site Mobilization Conference: Owner's Representative will administer site mobilization conference at Project site for clarification of responsibilities of Owner, Owner's Representation and **Contractor**, use of site and for review of administrative procedures. Site mobilization conference shall be held within fourteen (14) calendar days of Notice to Proceed, unless otherwise directed by Owner's Representative.
 - 1. Agenda: Pre-Construction/Site Mobilization Conference shall cover the following topics at a minimum:
 - a. Special Project Procedures: Implementation of requirements as specified in Section 013100 – COORDINATION.
 - b. Subcontractors List: Provide PDF electronic file. Distribute and discuss list of subcontractors and suppliers.
 - c. Construction Schedule: Provide per Section 013200. Distribute and discuss initial construction schedule and critical work sequencing of major elements of Work, including coordination of Owner furnished **Contractor** installed (OFCI) products, Owner furnished/ Owner installed (OFOI) products, and work under separate contracts, by utility agencies and companies and Owner.
 - d. Designation of Key personnel: Designate key personnel and update project directory for Owner, Owner's Consultants, **Contractor**, major subcontractors, major materials suppliers, serving utility agencies and

companies, other contractors performing work under separate contracts and governing authorities having jurisdiction.

- e. Project Communication Procedures: Review requirements and administrative requirements for written, electronic and oral communications.
 - f. Change Procedures: Review requirements and administrative procedures for Change Orders, Field Orders, Owner's Representative's Supplemental Instructions, and **Contractor** Requests for Information.
 - g. Coordination: Review requirements for **Contractor** coordination of Work; review sequence and schedule for work being performed for Owner under separate contracts.
 - h. Submittals Administration: Provide per Section 013300 and Section 016100. Review administrative procedures for shop drawings, project data and sample submittals and review of preliminary submittals schedule.
 - i. Project As-Built Documents: Provide per Section 017700 and Section 017800. Review requirements and procedures for project as-builts, specifications and other documents.
 - j. Construction Facilities and Temporary Utilities: Provide per Section 015100 and Section 015200. Designate storage and staging areas, construction office areas; review temporary utility provisions; review Owner requirements for use of premises.
 - k. Materials and Equipment: Review substitution requirements; review schedule for major equipment purchases and deliveries; review materials and equipment to be provided by Owner (OFCI and OFOI products).
 - l. Site Access by Owner's Representative and Owner's Consultants: Review requirements and administrative procedures **Contractor** may institute for identification and reporting purposes.
 - m. Testing and Inspection: Provide per Section 014550 and other sections of the Contract. Review tests and inspections by independent testing and inspection agencies, manufacturers, and governing authorities having jurisdiction.
 - n. Permits and Fees: Review Contract requirements; review schedule and process for obtaining permits and paying fees.
 - o. Hours of Work and Work Restrictions per Section 011400.
 - p. Hot Works Permit.
- B. Billing Meetings: A billing meeting will be conducted by the Owner's Representative each month prior to submittal of the Application for Payment. Agenda: review of the percent complete relating to the submitted Schedule of Values. Prior to the Billing Meeting the

Contractor will submit a draft of the Application for Payment for review by the IOR and Owner Representative.

- C. Progress Meetings: Progress meetings shall be periodically scheduled throughout progress of the Work. Frequency shall be as determined necessary for progress of Work. Generally, it is intended progress meetings be held once a week as designated by the Owner's Representative.
 - 1. Administration: Owner's Representative shall make physical arrangements for meetings and prepare agenda with copies for participants, preside at meetings, record minutes, and distribute an electronic file within four (4) workdays to **Contractor**, Owner's Consultants, and other participants affected by decisions made at meetings.

2. Attendance: **Contractor's** Project Manager and jobsite Superintendent shall attend each meeting. **Contractor** 's subcontractors and suppliers may attend as appropriate to subject under discussion. Owner will have a representative at each meeting. Owner's Consultants, as appropriate to agenda topics for each meeting and as provided in Owner/Consultant Agreement, will also attend.

- a. Suggested Agenda for Progress Meetings:

- 1) Building Code/Fire Marshal Issues
- 2) Design Issues
- 3) Submittals and Long Lead Items
- 4) OFCI and OFOI products.
- 5) Request for Information
- 6) Safety Issues
- 7) Scheduling Status/1 Week Prior and 3 Week Look Ahead
- 8) Potential Schedule Delay Issues
- 9) Incomplete or Non-Conforming Work
- 10) Inspection Requests
- 11) Utility Shutdowns and Dig Notifications
- 12) Instructional Bulletins and Field Orders
- 13) Change Orders/Cost Proposals
- 14) Payment Applications and As-Built Documents
- 15) Miscellaneous Business
- 16) Other items affecting progress of the Work

- D. Guarantees, Bonds, Service and Maintenance Contracts Review Meeting: Eleven months following the date of Substantial Completion, a meeting will be conducted by Owner's

Representative to review the guarantees, bonds and service and maintenance contracts for materials and equipment.

- E. In addition to meetings listed above, **Contractor** shall hold coordination meetings and pre-installation conferences to assure proper coordination of Work.
 - 1. Pre-installation Conferences: When required in individual Specification Sections, convene a pre-installation conference prior to commencing Work.
 - a. Require attendance by representatives of firms whose activities directly affect or are affected by the Work specified.
 - b. Review conditions of installation, preparation and installation procedures and coordination with related Work and Work under separate contracts.
- F. Location of all meetings will be as designated by Owner's Representative. Participants at all meetings shall be Owner's Representatives, Consultants and/or Vendors, **Contractor**, Superintendent, Subcontractors, and others as appropriate.

1.04 SUBMITTALS

- A. Coordination of Submittals: Schedule and coordinate submittals as specified in Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES, Section 017700 – CLOSEOUT PROCEDURES and Section 017800 – CLOSEOUT SUBMITTALS.
 - 1. Coordinate submittal effort of various trades, subcontractors and suppliers having interdependent responsibilities for installing, connecting, and placing into service such equipment, materials or installations as necessary for the Work.
 - 2. Coordinate requests for substitutions to assure compatibility of space, operating elements, and effect on work of others.
 - 3. **Contractor** shall submit the following submittals to the Owner's Representative who will forward directly to the appropriate State Agencies for their review and approval:
 - a. Fire Protection Drawings: Refer to Division 21
 - b. Fire Alarm System: Refer to Division 28
- B. Coordination/Engineering Drawings: Submit in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES and as specified herein.
- C. Work Plans: Submit as specified herein.

1.05 COORDINATION

- A. Coordination: **Contractor** shall coordinate the Work as stated in the General Conditions of the Contract. Work of the Contract includes coordination of the entire work of the Project, from beginning of construction activity through Project closeout and warranty periods. **Contractor** shall also coordinate Work under the Contract with work under separate contracts by Owner. **Contractor** shall cooperate with Owner and others as directed by Owner's Representative in scheduling and sequencing the incorporation into the Work of

Owner Furnished/**Contractor** Installed (OFCI) products identified in the Contract Documents.

1. Coordinate completion and cleanup of work of the separate trades, subcontractors, vendors, etc., in preparation for Owner occupancy.
 2. After Owner occupancy, coordinate access to site by various trades, subcontractors, vendors, etc., for correction of defective work and/or work not in accordance with Contract Documents, to minimize Owner disruption.
 3. Assemble and coordinate closeout submittals specified in Section 017700 – CLOSEOUT PROCEDURES.
- B. Construction Interfacing and Coordination: Layout, scheduling and sequencing of Work shall be solely **Contractor** 's responsibility. **Contractor** shall bring together the various parts, components, systems and assemblies as required for the correct interfacing and integration of all elements of Work. **Contractor** shall coordinate Work to correctly and accurately connect abutting, adjoining, overlapping and related elements, including work under separate contracts by Owner and utility agencies, if any.
- C. Installation of Systems into Project Space: Follow routings shown for pipes, ducts and conduits as closely as practicable, as shown on the Contract Documents with due allowance for available physical space; make runs parallel with line of building. Utilize space efficiently to maximize accessibility for other installations, future maintenance and repairs. In finished areas, except as otherwise shown, conceal pipes, ducts and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- D. Utility Work: Work occurring on or in the immediate vicinity of critical utilities must be directly supervised at all times by **Contractor** qualified personnel. Requirements stated herein for notification, work plans, dig notification forms and marking locations of existing utilities shall apply. **Contractor** will be held fully liable for costs and damages due to unplanned interruption of critical utilities, including any personal injury to public, visitors, or staff.
1. Provide supervision and coordination necessary to meet requirements of electrical power connection as set forth by the Pacific Gas and Electric (PG&E).
 2. Provide reasonable and convenient staging and access areas to permit PG&E, its vendors or subcontractors, to install, modify or remove electrical transformers or other components of the electrical power system furnished and installed by PG&E.

1.06 COORDINATION OF SUBCONTRACTORS AND SEPARATE CONTRACTS

- A. Conflicts: Conflicts shall be resolved by the **Contractor** bears primary responsibility for conflict resolution regarding the coordination of all building trades, subcontractors, and suppliers.
- B. Superintendence of Work: **Contractor** shall appoint a field superintendent who shall direct, supervise, and coordinate all Work in the Contract Documents.
- C. Subcontractors, Trades and Materials Suppliers: **Contractor** shall require all subcontractors, trades, crafts and suppliers to coordinate their portions of Work with the

Superintendent to prevent scheduling, sequencing, dimensional and other conflicts and omissions.

- D. Coordination with Work Under Separate Contracts: **Contractor** shall coordinate and schedule Work under Contract with work being performed for Project under separate contracts by Owner. **Contractor** shall make direct contacts with parties responsible for work of the Project under separate contracts, in order to provide timely notifications and to facilitate information exchanges.
- E. Service Connections: Except as otherwise indicated, final connection of mechanical services to general work is defined as being mechanical work; final connection of electrical services to general work is defined as electrical work.

1.07 OWNER CRITERIA

- A. During the Base Construction time, **Contractor** shall allow Owner 14 calendar days to move Owner equipment and/or provide furnishings. **Contractor** shall notify Owner's Representative in writing a minimum of fourteen (14) calendar days prior to completion of area described above.
 - 1. **Contractor** shall show this time as a distinct activity on the detailed project schedule.
- B. Equipment Coordination: **Contractor** and Owner supplied equipment will require complete installation data be exchanged directly between **Contractor** and vendors and subcontractors involved as progress of Project requires. Individual requesting information shall advise when it is required. Incorrect, incomplete, delayed or improperly identified equipment causing delay or error in installation will require entity causing such action to be liable for modifications or replacements necessary to provide correct and proper installation, including relocations.
- C. **Contractor** shall provide large scale casework and equipment drawings for casework and equipment service rough-in locations (dimensioned from building features), service characteristics, and locations of studs or blocking where such locations are critical to mounting or otherwise installing equipment and casework. Furnish sizes and spacing required for mechanical and electrical cutouts, and a complete brochure of fittings, sinks, outlets, or other information to provide a complete assemblage of the items and accessories being furnished.
- D. Interruption of Services: Construction Work shall accommodate Owner's use of surrounding and adjacent premises during the construction period and shall provide continuous public access and use of surrounding and adjacent facilities. **Contractor** shall not deny access to public use facilities until an alternate means of public use has been provided. An interruption of service is defined as any event which in any way interrupts, disrupts or otherwise discontinues, even momentarily, the services provided by Owner to its patients and staff. Adequate notice, as described below, shall be given to Owner when any interruption of services or interference with the use of existing buildings and roads are anticipated. Any interruption of service will be made only by Owner upon such notice. Interruptions to Owner services will not be made without prior notification and approval by

Owner. **Contractor** shall never interrupt any Owner service without direct Owner participation.

1. Dig Notification: **Contractor** shall complete and submit for review to Owner's Representative, a Dig Notification Form, included at the end of this section, and obtain written authorization from Owner prior to the commencement of any digging activities. Digging activities include exploratory demolition, soils excavation, concrete core drilling, and saw cutting. **Contractor** shall include all pertinent information with the Dig Notification Form and submit with detailed work plan fourteen (14) calendar days prior to desired digging activity.
 2. The **Contractor** shall contact USA North 811 prior to starting underground Work to locate existing underground utilities.
 3. **Contractor** shall mark locations of all known utilities on ground of dig area with marker paint.
 4. Prior to commencement of digging activities, **Contractor** shall verify project inspector has inspected the dig site and confirmed the site marking as accurate, complete and in conformance with site utility plans.
 5. **Contractor** shall verify with Owner's Representative that all interested hospital departments have been notified of intent to begin digging operation.
 6. Record documents are required for dig activities. **Contractor** shall provide As-Built drawings.
- E. Shutdown Procedures: **Contractor** shall complete and submit for review and approval to Owner a Request for Shutdown form, included at the end of this section. **Contractor** shall include all pertinent information to assist Owner in coordination of shutdown activities. The Shutdown Request Form shall be submitted with a detailed work plan addressing the proposed shutdown not less than fourteen (14) calendar days prior to desired shutdown.
- F. The Owner does not normally charge for its shutdown support services. However, if poor planning and/or poor execution of a shutdown by the **Contractor** causes excessive time and effort for Owner personnel, the Owner reserves the right to back charge the **Contractor** for this effort required to support such shutdown.
1. **Contractor** shall verify with Owner's Fire Marshal that all appropriate Interim Life Safety Measures (ILSM) are in place.
 2. **Contractor** shall determine that proper and appropriate coordination and notification has been completed, including written authorization from Owner's Representative, prior to shut down.
 3. Service shutdowns shall require specific work plans to be submitted to and coordinated with Owner's Representative. Work Plan should reflect various work trades, activities or entities requiring active participation with Owner teams to coordinating hospital functions with construction activities.
 - a. **Contractor** shall request, schedule, and conduct a General Work Plan Meeting prior to any work activity occurrence. During this meeting

Contractor and Owner shall produce and agree to a list of work activities, which will require digging and/or shutdown coordination and procedures.

- b. Owner's Representative, upon receiving the agreed submission for coordination, shall schedule the actual digging and/or shutdown at the earliest possible date not later than fourteen (14) calendar days from receipt of the submission. Operation of valves, switches, etc. to affect shutdowns shall be operated by Owner personnel only.
 - c. A shutdown is defined as any interruption of services provided by Owner to its patients and staff.
4. Planned service shutdowns shall be accomplished during periods of minimum usage. **Contractor** shall plan work to restore service in minimum possible time and shall cooperate with the Owner to reduce number of shutdowns.
- a. Notwithstanding the provisions of Article 14.6 of the General Conditions of the Contract, **Contractor** may be required to perform certain types of work outside normal time periods.
 - 1) Non-normal times shall include, but not be limited to, periods of time before 7:00 a.m. and after 5:00 p.m. in the evening, weekend days, or legal holidays, or such periods of time which constitute split shifts or split working periods.
 - 2) **Contractor** shall include allocation of the cost of this work as part of the base bid and shall not be entitled to additional compensation as a result of such work during non-normal time periods.
 - 3) **Contractor** shall include the non-normal periods as distinct activities on the detailed project schedule.
 - 4) **Contractor** is advised and **Contractor** shall be prepared, at Owner written request, to perform certain shutdown and asbestos related work during non-normal time periods.

- G. Utility locations: Refer to Section 017600. General location of utility lines and services may be shown on the drawings or described elsewhere, Owner does not warrant the accuracy of the locations shown or described. Determination of the actual on-site locations of utility lines and services prior to the commencement of work shall be the responsibility of the **Contractor** shall complete layout/research for Points of Connection (P.O.C.) and clean/prep piping at P.O.C. All capping, relocation or removal of such lines and services shall be performed by **Contractor** as a part of the Contract. New/continued piping and services installation shall be prefabricated and in place prior to the shutdown. All materials and tools required to complete the work must be at the shutdown location(s). **Contractor** shall not assume existing valves will hold 100%. **Contractor** is required to have at least one (1) alternate method (including parts and equipment) to complete installation once shutdown has started. Note: only wheel type cutters shall be used on copper pipe to reduce contamination to existing systems/valves.

- H. Detailed Work Plans: **Contractor** shall develop and submit for review and approval to Owner's Representative detailed work plans for specific work activities, both inside and outside the work area, associated with impact to, or interruption of services and operation, and dig activities. Work Plans shall be submitted as a PDF electronic file with Table of Contents indexed. Work Plans shall include written description of work activity, detailed schedule with proposed sequence of operation and activity duration, type of equipment to be used, a copy of site plan highlighted to indicate sequencing and location of work and equipment, completed Request for Shutdown and/or Dig Notification forms as applicable, conformance to ILSM, and control methods for noise, vibration and airborne contaminants.
1. Work Plan submittal will not be accepted unless all required information is provided at time of submittal.
 2. Submit Work Plan at least fourteen (14) calendar days prior to the commencement of any associated work activities.
 3. Coordination/Engineering Drawings: **Contractor** shall provide a complete set of Coordination/ Engineering Drawings that indicates the architectural and structural building components; and combines all piping, conduits, fire sprinkler system, equipment, hangers, braces and other building components into one composite drawing for each floor, wing or area of work. Submit the Coordination/ Engineering Drawings as a bookmarked PDF electronic file. These drawings are for the **Contractor's** and Owner's use during construction and shall not be construed as replacing any shop drawings, "As-Builts", or record drawings required elsewhere in the Contract Documents. Owner's review of these drawings is for design intent only and shall not relieve the **Contractor** of the responsibility for coordination of all work performed per the requirements of the Contract.
 - a. **Contractor** shall prepare and submit complete 1/4" = 1' - 0" coordination drawings, including plans, sections, details as are appropriate indicating the area layout, complete with debris removal area and materials access points, and all mechanical and electrical equipment in all areas and within above and below ceiling spaces for new and existing conditions, including bottom of all ducts, plenum, pipe and conduit elevations. Drawings shall show all structural and architectural components, restraints and other obstructions that may affect the work. Electronic or photo reproduction of Owner's Architectural Drawings is not acceptable.
 - b. **Contractor** and each Subcontractor shall ensure all relevant mechanical and electrical equipment, piping, conduit, fire sprinkler system, ceiling

hangers, braces etc., are shown and will fit, together with necessary items such as lights, ducts, fans, pumps, piping, conduit and the like.

- c. **Contractor** shall indicate all locations of expansion/ seismic joints and indicate how expansion for piping, conduit and other components is provided.
- d. **Contractor** shall indicate all locations for access doors or other means of access at conditions above and below for items requiring access or service including but not limited to valves, mechanical equipment, electrical equipment valves and other components. The **Contractor** is responsible that piping, conduit, braces and other obstructions do not block access to items indicated above.
- e. Submit completed and fully coordinated PDF electronic indexed file drawings with bookmarked Sheet Index together with **Contractor** comments indicating possible areas of conflict for review to Owner's Representative prior to start of work.
- f. Penetrations: **Contractor** shall prepare a sleeving layout (1/4" scale) indicating size and locations of sleeves. Trades shall indicate to **Contractor** their requirements and locations. PDF electronic files to applicable trades and Owner's Representative.
- g. Completion of work: All coordination drawings shall be submitted together with record (as built) drawings of all trades involved in accordance with Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Request for Shutdown (RFS) Info/Impact Report
- B. Dig Notification Form

END OF SECTION 01 31 00

REQUEST FOR SHUTDOWN (RFS) INFO/IMPACT REPORT

PROJECT NAME: _____

OWNER RFS# _____

PROJECT #:

HCAI #:

CONTRACTOR RFS #:

TODAY'S DATE: _____

SHUTDOWN DATE: _____

SUSPEND DATE: _____

TO: COUNTY OF LAKE
PUBLIC SERVICES
333 2nd Street
Lakeport, CA 95453

P: 707-262-1618
C: 707-245-6911

Project Manager's email address:
Joseph.Cooper@lakecountyca.gov

FROM: _____

Request Date: _____

Shutdown Target Date: _____

Requested By: _____

Requestor's Phone #: _____

Shutdown Work (Utility Specific): _____

Scope (Brief Description of Work): _____

Impact (Areas & Users): _____

Additional Comments: _____

DIG NOTIFICATION FORM

PROJECT #: _____ HCAI#: _____ DATE: _____

TO: COUNTY OF LAKE
PUBLIC SERVICES
333 2nd Street
Lakeport, CA 95453

P:707-262-1618
C:707-245-6911

Project Manager's email address:
Joseph.Cooper@lakecountyca.gov

FROM:

1. Has USA been notified? YES ___ NO ___
When? _____

2. Are all known utilities marked? YES ___ NO ___

3. Location of dig shown on attached site plan? YES ___ NO ___
Purpose _____

4. **Dates digging will take place** _____
Place _____

Signed: _____

OWNER USE ONLY

Date received: _____

1. Utilities verified by IOR? YES ___ NO ___

2. Dig activities coordinated with all parties? YES ___ NO ___

3. Comments: _____

Date Authorized: _____ Signed: _____

Date Returned: _____ Signed: _____

Comments: (Utilities encountered, disruptions, successes, weather, etc.)

Copies: Owner _____ Consultants _____ File _____

SECTION 01 32 00

CONTRACT SCHEDULES

PART I - GENERAL

1.01 SCOPE

- A. Preliminary Contract Schedule, Contract Schedule, updated Contract Schedules, Short Interval Schedules (SIS), Recovery Schedules and As Built Schedule.
- B. Sub-networks of activities (Fragnets) supporting Time Extension Requests.

1.02 DEFINITIONS

- A. Construction Schedule/CPM Schedule/Schedule: The most recent; Baseline Schedule, Updated Schedule or Revised Schedule.
- B. Final Baseline Schedule: A final and ongoing Schedule for the project that has been reviewed and accredited by the Owner's Representative
- C. Critical Work activities are defined as Work activities that, if delayed or extended, will cause a critical delay as defined in General Conditions Article 8. All other Work activities are defined as non-critical Work activities and are considered to have float.
- D. Float is defined as the time that a non-critical Work activity can be delayed or extended without causing a critical delay as defined in General Conditions Article 8. Neither the **Contractor** nor the Owner shall have an exclusive right to the use of float. Float is a shared resource available to each party to the contract. The **Contractor** shall document the effect of the use of float on the updated Contract Schedule.
- E. Recovery Schedule: Schedule required when any Revised Schedule or Update Schedule shows the work to be more than 14 calendar days behind the latest Owner-accepted contract end date.
- F. Short Interval Schedule (SIS): Schedule prepared on a weekly basis demonstrating the work accomplished the prior week and work planned for the upcoming three weeks.

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples:
 - 1. Proposed Scheduling Software and qualifications of individual preparing schedules.
 - 2. Preliminary Contract Schedule
 - 3. Contract Schedule including graphical and tabular reports.
 - 4. Monthly Updates to Contract Schedule, including Narrative Report.
 - 5. Short Interval Schedules
 - 6. Final As-Built Schedule
- B. Include an electronic version of all submittals required by this specification, including Narrative prepared in MS Word or .pdf format, CPM schedule in .xer file (P6 backup) or other schedule native file format if accepted under 1.3. A.1 above, .pdf of full schedule, and .pdf of critical path. The following fields shall be included:
 - 1. Activity identification
 - 2. Activity description
 - 3. Duration, start, and finish dates.
 - 4. Percentage of completion
 - 5. Total float
 - 6. Responsible party
 - 7. Predecessors and successors

PART II - PRODUCTS

2.01 SOFTWARE

- A. The **Contractor** shall use Primavera P6 by Oracle Corporation, or equal to produce the schedule and all required graphical and tabular reports.

PART III - EXECUTION**3.01 PRELIMINARY CONTRACT SCHEDULE**

- A. Within 10 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, **Contractor** shall submit the Preliminary Contract Schedule in both native and .pdf format to the Owner's Representative for acceptance. The Preliminary Contract Schedule shall represent the **Contractor's** plan for accomplishing the work within the Contract time showing all significant milestones for the Contract period as well as a detailed work plan for the first 90 calendar days following the Notice to Proceed. This detailed work plan shall identify in detail the following activities for the first 90 calendar days:
1. Preparation of equipment and material submittals for review. List Project submittals within Schedule per each specification section including Division 1 requirements. Indicate dates for submission of required submittals. Note: schedule shall include 18 calendar days for the Owner's review of the Preliminary Contract Schedule.
 2. Make submissions within the following number of days after the Notice to Proceed:
 - a. Items needed in initial stages of Work or requiring long lead-time for ordering: 30 calendar days.
 - b. Deferred approval submittals, for review and approval by agencies such as Owner's when required: 60 calendar days.
 - c. Electrical, mechanical and equipment items other than those covered by item "a" above: 60 calendar days.
 - d. All other items: 90 calendar days.
 3. Procurement schedule.
 4. Critical Path for the first 90 calendar days.
- B. The Preliminary Contract Schedule shall acknowledge significant known constraints and include all anticipated activities prior to the Notice to Proceed.
- C. The Preliminary Contract Schedule shall not include any actual dates or progress measured against any activities.
- D. Acceptance of the Preliminary Contract Schedule is a condition for approval of the first progress payment application.
- E. The **Contractor's** progress shall be measured against the Preliminary Contract Schedule until such time as the Owner accepts the **Contractor's** first Contract Schedule. The Preliminary Contract Schedule shall be incorporated into the **Contractor's** proposed Contract Schedule.

- F. Unless approved by the Owner's Representative, there shall be no activities shown with durations greater than 14 calendar days (excluding submittals, submittal reviews, and procurement activities).

3.02 CONTRACT SCHEDULE (BASELINE)

- A. The Contract Schedule shall represent a practical plan to fully complete the Contract within the Contract Time. The Contract Schedule shall include a complete sequence of construction, in adequate detail for coordination of the Work and shall be coordinated with the preparation of the Schedule of Values per 01 29 00 Measurement and Payment.

- B. Form

- 1. The proposed first contract schedule shall be produced using CPM (Critical Path Method) techniques, in the PDM (Precedence Diagram Method) method of scheduling. The Contract Schedule shall be calculated using the Retained Logic method. Progress override calculations shall not be acceptable. The schedule shall not use negative float or constraints on work activities.
- 2. The Contract Schedule shall identify all holidays and non-working days.
- 3. Identity of the party responsible for the activity (i.e., Owner, General **Contractor**, specific subcontractor, etc.)
- 4. The Contract Schedule activities shall be coded with the following information applicable to each activity:
 - a. Area of the project
 - b. Identity of the party responsible for the activity (i.e., Owner, General **Contractor**, specific subcontractor...)
 - c. Specification section applicable to activity
 - d. Phase
 - e. Sequence – The following sequences shall be identified:
 - 1) Administrative
 - 2) Submittal and Review
 - 3) Fabrication
 - 4) Construction: including phasing and sequencing as identified in 011400 Work Restrictions
 - 5) Inspection, Commissioning, and Close-out

C. Content

1. The Contract Schedule shall identify all Work activities in correct sequence for the completion of the Work within the Contract Time. Work activities shall include the following:
 - a. Major **Contractor**-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or Owner's Representative's prior acceptance.
 - 1) Show dates for the submission, review, and approval of each such submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by the Owner.
 - 2) The schedule shall allow submittal review time in accordance with Section 01 33 00 Shop Drawings, Product Data, Samples.
 - b. System test dates.
 - c. Scheduled overtime Work to the extent permitted by Contract Documents.
 - d. Dates **Contractor** requests designated workspaces, storage area, access, and other facilities to be provided by the Owner.
 - e. Dates **Contractor** requests orders and decisions from the Owner on designated items.
 - f. Dates **Contractor** requests Owner-furnished equipment.
 - g. Dates **Contractor** requests Owner-furnished utilities.
 - h. Planned dates for shutdown, connection, and relocation of existing utilities.
 - i. Planned dates for connecting to or penetrating existing structures.
 - j. Planned dates for scheduled inspections as required by Codes, or as otherwise specified.
 - k. Commissioning Sequence and activities for all Building Systems.
2. Unless approved by the Owner's Representative, there shall be no activities shown with durations in excess of 7 calendar days (excluding submittals, submittal reviews, and procurement activities). Milestones should be listed for the completion of wings, floors, and other similar areas.
3. The allowable monthly rain days per the Supplemental Conditions shall be incorporated into the Schedule.
4. Identify types of calendars used and the logic of their application.

D. Submission

1. The first Contract Schedule shall be submitted to the Owner not later than 30 calendar days after Notice to Proceed. The period covered by Contract Schedule shall be the Contract Time as specified in the Notice to Proceed. The Contract Schedule shall incorporate the logic of the Preliminary Contract Schedule covering the first 90 calendar days following the Notice to Proceed. Items to be included with first submission:
 - a. Contract Schedule (Baseline)
 - b. Critical Path Schedule excluding all non-critical Work activities.
 - c. Narrative
2. Tabular Computer Reports
 - a. As requested by the Owner, the **Contractor** shall submit various computer-generated tabular reports.
 - b. As requested by the Owner's Representative, the **Contractor** will be required to submit additional Schedule Reports.

E. Acceptance

1. Upon receipt, the Owner's Representative shall review the proposed first Contract Schedule. Within 21 calendar Days of the Owner's receipt of the proposed first Contract Schedule, the Owner's Representative shall schedule a review meeting with the **Contractor** for the purpose of jointly reviewing the proposed first Contract Schedule.
2. If the proposed first Contract Schedule is accepted by the Owner's Representative, it shall become the Contract Schedule (or Baseline Schedule). Such acceptance shall not relieve **Contractor** from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve **Contractor** from sole responsibility for any errors in the Contract Schedule.
3. If the **Contractor** or the Owner's Representative determines the proposed first Contract Schedule to need revision, the **Contractor** shall revise and resubmit the proposed first contract schedule to the Owner's Representative within 14 calendar days for acceptance. If accepted, it shall become the Contract Schedule. Such acceptance shall not relieve **Contractor** from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve **Contractor** from sole responsibility for any errors in the Contract Schedule. If not accepted the **Contractor** will resubmit within 10 calendar days for a new review period to start.

- a. No progress payment beyond the second progress payment will be paid to the **Contractor** until such time as the Owner's Representative has approved the **Contractor's** first proposed Contract Schedule.

F. Schedule Logic

- 1. Activity schedule logic should normally be of Finish-to-Start relationship type and assembled to show order in which **Contractor** proposes to carry out the Work. The logic should indicate restrictions of access, availability of Work areas, and availability and use of manpower, materials, and equipment. Form basis for assembly of schedule logic on the following criteria:
 - a. Indicate which activities must be completed before subsequent activities can be started.
 - b. Indicate which activities can be performed concurrently.
 - c. Indicate which activities must be started immediately following completed activities.
 - d. Indicate resource sequencing due to availability or space restrictions.
 - e. Lags shall not be used if can be represented with additional schedule detail. Finish-to-start logic ties with positive lags are not permitted. All positive time consumption should be represented by a schedule activity. Start-to-start, or finish-to-finish logic ties with negative lags are not permitted.
 - f. Lags in Start-to-Start or Finish-to-Finish relationships must not exceed the duration of the predecessor or successor activity, respectively.

G. Non-Sequestering of Float

- 1. **Contractor** shall not sequester float through scheduling techniques, including, but not limited to, constrained dates, extending Work Activity duration estimates, using preferential logic, such as lag or negative lag (lead), unless specifically requested in writing and approved by Owner's Representative. It is acknowledged that Owner-caused or **Contractor**-caused time savings to Activities on, or near, the critical path will increase float, such increase in float shall not be for the exclusive use or benefit of either Owner or **Contractor**.

H. Out of Sequence Logic:

- 1. Resolution of conflict between actual work progress and schedule logic: When out of sequence activities develop in Schedule because of actual construction progress, **Contractor** shall submit revision to schedule logic to conform to current status and direction and include reasons in schedule update Narrative.

I. Preferential Logic:

1. The intended purpose of scheduling on a construction project is to help ensure that **Contractor's** work on the project is adequately planned, tracked and managed. A construction schedule can be as simple as a list of activities, organized in a logical sequence, and time scaled. The concept of construction scheduling is to see that all activities necessary to complete the work, in accordance with the contract documents requirements, are properly planned, coordinated and managed. When **Contractor's** schedule activities are not sequenced in the most logical manner, but rather, in a manner as to create the maximum possible opportunity for Owner interference to claim delay or interruption, the Owner will reject the schedule with a request of different sequence of activities.

3.03 EXPERIENCE REQUIREMENTS

- A. **Contractor** shall designate an individual from **Contractor's** staff or a consultant who shall be responsible throughout the duration of the project for preparation of all schedules and reports as required by this specification. This individual shall also be required to attend all meetings with the Owner's Representative as required by this specification. The **Contractor** shall demonstrate to the satisfaction of the Owner that the individual or consultant has at least 3 years of experience preparing, maintaining, and administering detailed project schedules on projects of the same or similar size and complexity as this project. The **Contractor** shall also demonstrate to the satisfaction of the Owner that the individual or consultant is proficient in the use of the scheduling software proposed for use by the **Contractor** on this project.
- B. Within 14 calendar days after the Notice of Selection as the Apparent Lowest Responsible Bidder, **Contractor** shall provide the Owner with the identification, qualifications, and experience of and references for the proposed individual or consultant.

3.04 MONTHLY UPDATES

- A. After acceptance of the first proposed Contract Schedule, **Contractor** shall update the Contract Schedule monthly. The update shall reflect progress as of the end of each month. **Contractor** shall submit monthly schedule update to the Owner's Representative for acceptance with the draft payment application and no later than the tenth day of the following month. The updates shall be made as follows:
 1. The Monthly updates shall report progress based upon percent complete of each activity or remaining duration. Actual start dates shall be recorded for those activities that have started. Actual finish dates shall be recorded for those activities that are completed. Activities that are in progress shall reflect an actual start date and the percentage completion for the activity. Actual dates shall be clearly distinguishable from projected dates.
 2. The updated Contract Schedule shall reflect an up-to-date status of the contract work as completed, and materials furnished and in permanent place that qualify for payment.
 3. The updated Contract Schedule shall reflect Contract Time changes included in all processed change orders for the progress month and each preceding month.

- B. Within 5 calendar days after receipt of the updated Contract Schedule in conjunction with the Application for Payment, the Owner's Representative shall review both and determine which work and material pay items qualify for payment; the approved data will then be returned to the **Contractor** for input. Within 14 calendar days, the **Contractor** and the Owner's Representative shall meet to review the Construction CPM Schedule and discuss any changes required.
- C. The **Contractor** shall then revise and resubmit (if required) the Updated Contract Schedule and Application for Payment to the Owner's Representative for payment approval.
- D. The monthly update shall be calculated using retained logic with a required finish date specified as the current contract completion date. Progress Override calculations shall not be acceptable.
- E. No Applications for Payment will be processed, nor shall any progress payments become due until updated Contract Schedules are accepted by Owner's Representative. The accepted, updated Contract Schedule shall be the Contract Schedule of record for the period it is current and shall be the basis for payment during that period. Acceptance of any updated Contract Schedules shall not relieve **Contractor** from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve **Contractor** from sole responsibility for any errors in the updated Contract Schedules.
- F. **Contractor** shall perform the Work in accordance with the updated Contract Schedule. **Contractor** may change the Contract Schedule to modify the order or method of accomplishing the Work only with prior agreement by the Owner.
- G. With each monthly updated Contract Schedule, the **Contractor** shall provide an accompanying narrative describing the progress anticipated during the upcoming month, critical activities, delays encountered during the prior month, delays anticipated during the upcoming month, and an audit of the Contract Time. The audit shall show current days allowed by contract, days used through the end of the month, days remaining, percent of time used to date, and percent complete as measured by cost loaded schedule, and days ahead of or behind schedule. In the event that the **Contractor** was delayed by any occurrence during the prior month, the narrative report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an accounting of days lost or gained.
- H. In the event the monthly update shows the **Contractor** to be behind schedule (negative float), the narrative shall include a description of actions needed to bring the project back on schedule.

3.05 LOOK AHEAD SCHEDULES

- A. Look Ahead Schedule is a schedule derived from the Contract Schedule (or the most current monthly update of the Contract Schedule) which indicates in detail all activities scheduled or worked on for the 1 prior weeks, and all activities scheduled to occur during the next 3 weeks.
- B. Provide detailed Look Ahead Schedules every week.
- C. Submit in 11-inch by 17-inch Gantt chart format.

- D. Look Ahead Schedule shall be generated from the then current Preliminary Contract Schedule, Contract Schedule, or updated Contract Schedule. Activities listed in the Look Ahead Schedule shall reference the activity identification or other such coding for correlation to the activities listed in the Contract Schedule.

3.06 TIME EXTENSION REQUEST DOCUMENTATION

- A. In the event the **Contractor** shall request an extension of Contract Time, **Contractor** shall comply with the requirements of the General Conditions, including without limitation, General Conditions Article 8. In addition to the requirements of the General Conditions, as a condition to obtaining an extension of the Contract Time, **Contractor** shall timely submit a sub-network of the events of the delay that demonstrates the impact to the activities in the **Contractor's** then current schedule, as well as the impact to the overall completion date of the project.
- B. If the Owner's Representative approves the extension of time, the next monthly updated Contract Schedule shall incorporate the subnetwork with the extension of time. In addition, the monthly updated Contract Schedule shall contain all changes mutually agreed upon by the **Contractor** and the Owner during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.

3.07 AS BUILT SCHEDULE

- A. As a condition precedent to the release of retention, the last update of the Contract Schedule submitted shall be identified by the **Contractor** as the "As Built Schedule". The "As Built Schedule" shall be submitted when all activities are 100 percent complete. The "As Built Schedule" shall reflect the exact manner in which the project was actually constructed (including start and completion dates, activities, sequences, and logic) and shall include a statement signed by the **Contractor's** scheduler that the "As Built Schedule" accurately reflects the actual sequence and timing of the construction of the project.

3.08 WEATHER DAYS ALLOWANCE

- A. Should inclement weather conditions, or the conditions resulting from weather, prevent the **Contractor** from proceeding with seventy-five (75) percent of the normal labor and equipment force engaged in the current critical activity item(s), (as shown on the latest CPM Progress Schedule accepted by the Owner's Representative), for a period of at least five (5) hours per day toward completion of such operation or operations, and the crew is dismissed as a result thereof, it shall be a weather delay day.

- B. The expected loss of days specified in the Supplementary Conditions, item 3 "Modification of General Conditions, Article 8 – Contract Time", shall be included in a separate identifiable critical activity labeled "Weather Days Allowance" to be included as the last critical activity of the project schedule prior to substantial or final completion (whichever is contractual). The weather allowance activity shall be on, and remain on, the critical path of the project throughout the life of the project until it has been absorbed. Typically, all activity's leading to completion shall go through the weather allowance activity first. When weather days are experienced, and are approved as such by the Owner's Representative, the **Contractor** shall either:
1. Increase the duration of the current critical activity(ies) by the number of weather days experienced, or
 2. Add a critical activity to the schedule to reflect the occurrence of the weather day(s).
- C. The duration of the weather day allowance activity shall be reduced as weather days are experienced and included in the schedule. Any remaining weather days in the weather day allowance activity at the completion of the project shall be considered as float and shall not be for the exclusive use or benefit of either the Owner or **Contractor**.
- D. The **Contractor** shall not receive any additional compensation for unavoidable delays due to inclement or unsuitable weather. If all the weather allowance has been used, any additional weather delay experienced by the **Contractor** may result in a non-compensable time extension upon submission of acceptable supporting documentation to the Owner's Representative.

END OF SECTION 01 32 00

SECTION 01 33 00

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Administrative requirements for shop drawings, product data and samples submittals
- B. Owner's and Owner's Consultant's review of submittals
- C. **Contractor's** review of submittals
- D. Shop Drawing Submittals
- E. Product Data submittals
- F. Sample submittals
- G. Field Samples and mock-ups
- H. Submittal Schedule requirements

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK: Subcontractor and materials suppliers list.
- B. Section 013200 – CONTRACT SCHEDULES: Submission and review of schedules and submittals.
- C. Section 014500 – QUALITY CONTROL: Test and Inspection Reports.
- D. Section 016100 - PRODUCT REQUIREMENTS
- E. Section 017700 – CLOSEOUT PROCEDURES: Occupancy/Acceptance /Final Payment Submittals.
- F. Section 017800 – CLOSEOUT SUBMITTALS: Preparation of Maintenance and Operating Data.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. General Submittals Review: Submittals shall be made in accordance with requirements specified herein and in individual Sections.
 - 1. Submittals shall be a communication aid between **Contractor**, Owner's Representative, and Owner's Consultant(s) by which interpretation of Contract Documents requirements may be confirmed in advance of construction.
 - 2. Submit on all products to be used on the Project. Make all submittals through the Owner unless otherwise directed.

- a. The Owner's Representative shall provide timely review of submittals and re-submittals.
 - 1) Owner's Representative shall have twenty-one (21) days from receipt to review all submittals twenty-one (21) days from receipt to review re-submittals.
 - 2) The Fire Marshal shall have twenty-eight (28) days from receipt to review all submittals twenty-eight (28) days from receipt to review re-submittals.
 - 3) Owner's Representative will prepare and keep a log of review time of all submittals.
3. Substitutions shall be submitted in accordance with Section 016100 – PRODUCT REQUIREMENTS.
4. Make submittals sufficiently in advance of construction activities to allow shipping, handling and review by the Owner's Representative and their consultants.
- B. Owner's and Owner's Consultants Review: Owner's Consultant's review will be only for general conformance with the design intent of the Contract Documents. Review of submittals is not conducted for purpose of determining accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the **Contractor** as required by the Contract Documents. Review actions of the Owner's Consultant or Owner shall not relieve **Contractor** from compliance with requirements of the Contract Documents. Changes shall only be authorized by separate written Change Order in accordance with the General Conditions of the Contract.
- C. Contractors Review: **Contractor** shall review, mark-up as appropriate and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittal shall clearly show it has been reviewed by **Contractor** for conformance with the Contract Documents and for coordination with requirements of the Work. Notify Owner's Representative in writing, at time of submission, of any changes in the submittals from requirements of Contract Documents.

1.04 SUBMITTAL REQUIREMENTS

- A. Prompt Submission: Submittals shall be submitted promptly in accordance with Submittal Schedule and in such sequence as to cause no delay in the Work or in the work of any separate contractor. Present information in a clear and thorough manner to aid orderly review.

B. Preparation: Title each submittal with the Owner's Project Name and the Owner's Project number, submittal date and dates of any previous submissions. Clearly mark each copy to identify product or model.

1. Identify each item on submittal by reference to Drawing sheet number, detail, schedule, room number, assembly or equipment number, Specification number Reference Standard (such as ASTM or Fed Spec Number) and other pertinent information to clearly correlate submittal with Contract Documents.
2. Include the names of the **Contractor**, Subcontractor, Supplier and Manufacturer.
3. Include field dimensions, clearly identified as such to establish relationship to adjacent or critical features of the Work or materials.
4. Include pertinent information such as performance characteristics and capacities, wiring or piping diagrams and controls, catalog numbers and similar data.
5. Modify manufacturer's standard schematic drawings and diagrams and other diagrams to delete information not applicable to the Work. Supplement standard information to provide information specifically applicable to the Work.
6. Identify changes from requirements of the Contract Documents.
7. Include 8" x 3" blank space on face of submittal for review stamps.
8. Include **Contractor's** review stamp, initialed or signed, and dated, certifying to the review of the submittal, verification of materials, field measurements, conditions, and compliance of the information within the submittal with the requirements of the Work and of the Contract Documents.

C. Number of submittals required:

1. Product Data Submittals: Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
2. Initial/Re-submitted Shop Drawing Review(s): Submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies.
3. Final Shop Drawing Review and Approval: After obtaining Owner's Representative approval of initial/re-submitted shop drawing submittals, as described in Section 1.04.C.2 above, **Contractor** shall submit PDF electronic file with booked marked table of contents and/or sheet index. Submittals for the Fire Department require an electronic file and two (2) hard copies. **Contractor** is responsible for providing all approved shop drawings for its use and use by subcontractors and/or suppliers.
4. Samples: Submit number specified. Samples shall be of sufficient size and quality to clearly illustrate the functional characteristics of the products, with integrally

related parts and attachment devices, including full range of colors, textures and patterns.

- D. Identifying Submittals: Identify each submittal by Specification section number followed by a number indicating sequential submittal for that Section. Re-submittals shall use the same number as the original submittal, followed by a letter indicating sequential re-submittal. Examples:
1. 092500 – 1 First submittal for Section 092500 – Gypsum Board
 2. 092500 – 2 Second submittal for Section 092500 – Gypsum Board
 3. 092500 – 2A Re-submittal of second submittal for Section 092500 – Gypsum Board
 4. 092500 – 2B Second re-submittal of second submittal for Section 092500 – Gypsum Board
- E. Resubmission Requirements: Revise and resubmit as specified for initial submittal. Identify any Changes other than those requested. Note any departures from Contract Documents or changes in previously reviewed submittals.
- F. Grouping of Submittals: Unless otherwise specifically permitted by Owner's Representative, make all submittals in groups containing all associated items as described

in each Specification Section. The Owner's Representative will reject partial submittals as incomplete.

- G. Unsolicited Submittals: Unsolicited submittals will be returned NOT REVIEWED.

1.05 DISTRIBUTION

- A. Reproduce and distribute finalized copies of Shop Drawings and Product Data, to the following:
 - 1. **Contractor's** Project site file.
 - 2. As-built Documents file maintained by **Contractor**.
 - 3. Pertinent Separate Contractors.
 - 4. Pertinent Subcontractors.
 - 5. Pertinent Supplier or Manufacturer.

1.06 FIELD SAMPLES AND MOCK-UPS

- A. Erect at the project site, at a location directed by Owner's Representative, mock-ups to a size as specified.
 - 1. The following mock-ups are required for this project: As defined in Construction Drawings and Specifications.
- B. Fabricate each Sample and mock-up to be complete and fully furnished. Unless otherwise agreed, full-size complete samples will be returned and may be incorporated into field mock-ups and Work.
- C. Mock-ups shall be removed by the **Contractor** at conclusion of the Work at no additional cost to the Owner.

1.07 SUBMITTAL SCHEDULE

- A. Submittals Schedule: refer to Section 013200 – CONTRACT SCHEDULES.
 - 1. The Submittal Schedule is a schedule for submission of Shop Drawings, Product Data and Samples by **Contractor**, and the processing and return of same by Owner.
 - 2. **Contractor** shall prepare the Submittal Schedule as described herein and coordinate it with the Contract Schedule. No submittals will be processed before the Submittal Schedule has been submitted to and accepted by Owner.
 - 3. Submittal Schedule shall be adjusted to meet needs of construction process and the Contract Schedule. Submit PDF electronic file with booked marked table of

contents and/or sheet index of the Submittal Schedule after it is completed and each time it is update by **Contractor**.

4. **Contractor** shall NOT begin fabrication or Work which requires submittals until the return of final reviewed and approved submittals have been received by the **Contractor**.

1.08 ENVIRONMENTAL PRODUCT DECLARATIONS

- A. Contractor must comply with Buy Clean California Act requirements per California Public Contract Code, Sections 3500-3505.
- B. Contractor shall submit to Project Manager/Construction Manager current facility-specific Environmental Product Declaration for each eligible material proposed to be used on the Project.
- C. Environmental Product Declaration (EPD): Type III environmental impact label, as defined by the International Organization for Standardization (ISO) standard 14025, or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance, and integrity.
- D. Eligible Materials: Any of the following:
 1. Carbon steel rebar.
 2. Flat glass.
 3. Mineral wool board insulation.
 4. Structural steel.
- E. Eligible Materials installed on the Project by Contractor must comply with any standards to the extent established in the BCCA or by Owner, whichever is more stringent. The facility-specific global warming potential for any Eligible Materials must not exceed any existing maximum acceptable global warming potential for that material pursuant to the BCCA or by Owner, whichever is more stringent ("EM Standards"). The standards are published on the Department of General Services (DGS) website and updated information can be found on this link: <https://www.dgs.ca.gov/PD/Resources/Page-Content/Procurement-Division-Resources-List-Folder/Buy-Clean-California-Act>
- F. Contractor shall not install any eligible materials on the project before submitting a facility-specific Environmental Product Declaration for that material.
- G. This section shall not apply to an eligible material for a particular contract if the Owner determines, upon written justification published on its Internet website, that requiring those eligible materials to comply would be technically infeasible, would result in a significant increase in the project cost or a significant delay in completion, or would result in only one source or manufacturer being able to provide the type of material needed by the state.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 33 00

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Relationship between Code, Ordinances, Standards and Contract Documents
- B. Applicable Codes, Laws and Ordinances
- C. Project Inspections
- D. Lakeport Fire District Fire Marshal Requirements

1.02 RELATED SECTIONS

- A. Section 013500 – SPECIAL PROCEDURES
- B. Section 014200 – REFERENCES
- C. Section 014500 – QUALITY CONTROL

1.03 RELATIONSHIP BETWEEN CODES, ORDINANCES, STANDARDS AND THE CONTRACT DOCUMENTS

- A. Authority: All codes, ordinances and standards referenced in Contract Documents shall have full force and effect as though printed in their entirety in the Contract Specifications.
- B. Precedence:
 - 1. Where specified requirements differ from requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
 - 2. Where Contract Drawings or Contract Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Contract Drawings and Contract Specifications shall take precedence so long as such increase is legal.
 - 3. Where no requirements are identified in Contract Documents, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.04 APPLICABLE CODES, LAWS AND ORDINANCES

A. Building Codes, Laws, and Regulations:

1. Work shall meet or exceed the requirements of and be performed in accordance with applicable, adopted code requirements, laws and requirements of all other regulatory agencies, including, but not limited to the following:

- a. California Code Series - 2022 Edition

- 1) California Administrative Code, California Code of Regulations – Title 24, Part 1
- 2) California Building Code, California Code of Regulations – Title 24, Part 2, Volume 1& 2
- 3) California Electrical Code, California Code of Regulations – Title 24, Part 3
- 4) California Mechanical Code, California Code of Regulations – Title 24, Part 4
- 5) California Plumbing Code, California Code of Regulations – Title 24, Part 5
- 6) California Energy Code, California Code of Regulations – Title 24, Part 6
- 7) Elevator Safety Construction Code, California Code of Regulations – Title 24, Part 7
- 8) California Historical Building Code, California Code of Regulations – Title 24, Part 8
- 9) California Fire Code, California Code of Regulations – Title 24, Part 9
- 10) California Existing Building Code, California Code of Regulations – Title 24, Part 10
- 11) California Referenced Standards Code, California Code of Regulations – Title 24, Part 12

- b. NFPA Code Series. National Fire Protection Association (NFPA) (as adopted by State agencies)

- 1) NFPA 13 – Standard for the Installation of Sprinkler Systems.
- 2) NFPA 14 – Standard for the Installation of Standpipe and Hose System
- 3) NFPA 72 – National Fire Alarm and Signaling Code
- 4) NFPA 80 – Standard for Fire Doors and Other Opening Protectives

- 5) NFPA 101 – Life Safety Code
- 6) NFPA 252 – Standard Methods of Fire Tests of Door Assemblies
- 7) NFPA 701 – Standard Methods of Fire Tests of Flame Propagation of Textiles and Films
- c. California Code of Regulation Series (embodied in California model codes as noted above)
 - 1) Title 8, Industrial Relations
 - 2) Title 17, Public Health (Chapter 7)
 - 3) Title 19, Public Safety
 - 4) Title 21, Public Works
 - 5) Title 22, Social Security
 - 6) Title 24, Parts 1, 2, 3, 4, 5, 9 and 12
 - 7) Title 25, Energy Insulation Standards
- d. Americans with Disabilities Act (ADA) 2010 (Federal Law)
- e. Rules and regulations of private and public utilities
- f. American National Standards Institute (ANSI)
- g. American Society of Testing Materials (ASTM)
- h. Federal Specifications (Fed. Spec.)
- i. Underwriters Laboratories
- j. Traffic controls per California MUTCD requirements
- 2. All dates to comply with editions adopted and accepted by Owner and Lakeport Fire District (AHJ/FIRE).
- 3. Unless otherwise specified, specific references to codes, regulations, standards, manufacturers' instructions, or requirements of regulatory agencies, when used to specify requirements for materials or design elements, shall mean the latest edition of each in effect at the date of submission of bids, or the date of the Change Order, as applicable.

4. References on Drawings or in Specifications to "code" or "building code" not otherwise identified shall mean the codes specified above, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction having authority over the project.

B. Other Applicable Laws, Ordinances and Regulations:

1. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
2. Work shall be accomplished in conformance with all regulations of Public Utilities and utility districts.
3. Where such laws, ordinances, rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to Contract Time or Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to execution date of the Agreement.
4. General **Contractor** shall not self-perform specialty contracting work defined in sections 7055 – 7059.1 of the California Business and Professions Code unless the General **Contractor** has the specialty contractor's license appropriate for the work performed. Otherwise, specialty contractors shall be retained by the contractor to perform specialty work identified in the project scope.

1.05 PROJECT INSPECTIONS

A. Provision of inspectors by Owner, if any, and Information pursuant to this Section and Section 1.04 above shall be subject to the following:

1. **Contractor** shall allow inspectors full access to Project at all times.
2. **Contractor** shall not take any direction, approvals or disapprovals from inspectors.
3. **Contractor** shall not rely on inspectors to ensure Work is completed in accordance with Contract Documents.
4. Acts of omissions of any inspector (including without limitation inspector's failure to observe or report deficiencies in **Contractor's** Work) shall not relieve **Contractor** for responsibility to complete Work in accordance with Contract Documents.

1.06 DEFERRED APPROVAL

- A. Where noted in the Contract Documents, certain items of materials and/or systems may require deferred approval pending submittals of shop drawings. For these items, **Contractor** shall submit details and structural calculations for anchorage, to comply with State of California Code of Regulations Title 24, table T17-23-J. Calculations shall be made by a licensed Structural Engineer registered in the State of California.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 41 00

SECTION 01 42 00

REFERENCES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Definitions and terms used in Contract Documents
- B. Reference Standards used in Contract Documents
- C. Common abbreviations and acronyms which may be used in Contract Documents

1.02 RELATED SECTIONS

- A. Section 014100 – Regulatory Requirements

1.03 DEFINITIONS OF TERMS

- A. Basic Contract Definitions: Words and terms governing the Work are defined in the General Conditions of the Contract, provided in the Contract Documents.
- B. Additional words and terms are used in the Drawings and Specifications and are defined as follows:
 - 1. Applicable: As appropriate for the particular condition, circumstance or situation.
 - 2. Approve (d): Used in conjunction with action on submittals, applications, and requests, is limited to duties and responsibilities stated in the General Conditions. Approvals shall only be valid if obtained in writing and shall not apply to matters regarding the means, methods, techniques, sequences and procedures of construction. Approval shall not release **Contractor** from responsibility to fulfill Contract requirements.
 - 3. And/or: If used, shall mean that either or both items so joined are required.
 - 4. By others: Work on the project that is outside the scope of Work to be performed under the Contract, but that will be performed by Owner, separate contractors or other means.
 - 5. **Contractor**-Furnished/Owner-Installed (CFOI): Items, systems or equipment purchased by the **Contractor** as part of the project and handed over to the Owner for installation.
 - 6. Construction Site: Same as site.

7. Directed: As instructed by Owner or Owner's Representative, in writing, regarding matters other than the means, methods, techniques, sequences and procedures of construction. Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by Owner's Representative", requested by Owner's Consultant" or Owner's Representative and similar phrases. No implied meaning shall be interpreted to extend the Owner's Representative responsibility into **Contractor's** supervision of construction.
8. Equal or Equivalent: As determined by the Owner's Consultant as being of the same quality, appearance, utility, durability, finish, function, suitability, and performance.
9. Furnish: Means "supply and deliver, ready for unloading, unpacking, assembly, installation, and similar operations".
10. Indicated: Refers to graphic representations, notes or schedules on Drawings, or Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used, it is to help locate the reference.
11. Install: Describes operations at the site including unloading, unpacking, assembly, erection, anchoring, applying, working to dimension, protecting, cleaning, and similar operations.
12. Installer: "Installer" is the **ContractorContractor**, or an entity engaged by the **Contractor**, as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - a. Experienced Installer: The term "experienced", when used with "installer" means having a minimum of five (5) previous Projects similar in size to this Project, and familiar with the precautions required, and with requirements of the authority having jurisdiction.
13. Jobsite: Same as site.
14. Necessary: as determined in the professional judgement of the Owner Representative through the Owner's Consultant as being necessary for the Work, in conformance with the requirements of the Contract Documents, and excluding

matters regarding the means, methods, techniques, sequences and procedures of construction.

15. Noted: Same as indicated.
16. Owner-Furnished/**Contractor**-Installed (OFI): Item, system or equipment furnished by Owner at its cost and installed by the **Contractor** as part of the Work.
17. Per: In accordance with or in compliance with.
18. Products: Materials, systems or equipment.
19. Project site: Same as site.
20. Proper: As determined by the Owner's Representative as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, which are solely the **Contractor's** responsibility to determine.
21. Provide: Means "furnish and install, complete and ready for use".
22. Regulation: Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, and rules, conventions and agreements within the construction industry that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.
23. Required:
 - a. As required by regulatory requirements of governing authorities.
 - b. As required by referenced standards.
 - c. As required by existing job conditions.
 - d. As generally provided by accepted construction practices of the locale.
 - e. As indicated on the Drawings and in the Specifications.
 - f. As otherwise required by the Contract Documents.
24. Scheduled: Same as indicated.
25. Selected: As selected by Owner's Representative or Owner's Consultant from the full national product selection of the manufacturer, unless otherwise specifically limited in the Contract Documents to a particular quality, color, texture or price range.
26. Shown: Same as indicated.
27. Site: Same as Site of the Work or Project Site; the area or areas or spaces occupied by the Project and including adjacent areas and other related areas occupied or used by the **Contractor** for construction activities, either exclusively or with others performing other construction on the Project. The extent of the

Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.

28. Testing Laboratories: Same as Testing and Inspection Agency.
29. Testing and Inspection Agency: An independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.
30. Owner-Furnished/**Contractor**-Installed (OFCI): Same as Owner-Furnished/**Contractor**-Installed.

1.04 REFERENCE STANDARDS

- A. References: The Drawings and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests, and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual Sections of the Specifications.
- B. Relationship to Drawings and Specifications: Such references are incorporated into and made a part of the Drawings and Specifications to the extent applicable.
- C. Referenced grades, Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified in the Drawings or Specifications, provide the highest, best and greatest of the alternatives or options for the intended use and prevailing conditions.
- D. Copies of Reference Standards:
 - 1. Reference standards are not furnished with the Drawings and Specifications. It is the responsibility of the **Contractor**, subcontractors, manufacturers, suppliers, trades and crafts to be familiar with these generally recognized standards of the construction industry.
- E. Jobsite Copies:
 - 1. **Contractor** shall obtain and maintain at the Project site copies of reference standards identified on the Drawings and in the Specifications in order to properly execute the Work.
- F. Edition Date of References:
 - 1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of the Contract.
 - 2. All amendments, changes, errata, and supplements as of the effective date shall be included.
- G. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is the responsibility of the

Contractor to be familiar with and have access to these nationally, and industry recognized specifications and standards.

1.05 ABBREVIATIONS & ACRONYMS

- A. Abbreviations and Names: Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable.
- B. Refer also to the "Encyclopedia of Associations", published by Gale Research Co., available in most libraries.
- C. The following are commonly used abbreviations which may be found on Contract Drawings and in Contract Specifications:

AA	Aluminum Association
AAA	American Arbitration Association
AAC	Architectural Anodizers Council
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ACPA	American Concrete Pumping Association
ADA	Americans with Disabilities Act
ADC	Air Diffusion Council
AFSA	American Fire Sprinkler Association
AGA	American Galvanizers Association (formerly AHDGA)
AGA	American Gas Association
AGC	Associated General Contractors of American
AI	Asphalt Institute
AIA	American Institute of Architects
AIMA	Acoustical and Insulation Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association International
ANSI	American National Standards Institute
APA	Engineered Wood Association (formerly American Plywood Association)
APWA	American Public Works Association
ARMA	Asphalt Roofing Manufacturers Association
ASAC	American Subcontractors Association of America
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASPE	American Society of Plumbing Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BOC	Board of Corrections
CABO	Council of American Building Officials
CAC	California Administrative Code (see California Code of Regulations (CCR))
CAL/OSHA	State of California Construction Safety Orders
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Electrical Code
CFC	California Fire Code
CFR	Code of Federal Regulations
CIMA	Construction Industry Manufacturers Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers' Institute
CMC	California Mechanical Code

CPC	California Plumbing Code
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
CTIOA	Ceramic Tile Institute of America, Inc.
DHI	Door and Hardware Institute
DSA	Division of the State Architect
EJMA	Expansion Joint Manufacturers Association
FGMA	Flat Glass Marketing Association
FM	Factory Mutual Research Organization
FS	Federal Specification (from GSA)
GA	Gypsum Association
GSA	General Services Administration
HCAI	Department of Health Care Access and Information (State of California)
IAPMO	International Association of Plumbing and Mechanical Officials
IEEE	Institute of Electrical and Electronics Engineers, Inc.
ISO	International Organization for Standardization
MIA	Masonry Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MM	State of California, Business and Transportation Agency, Department of Transportation, "Materials Manual"
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NEC	National Electrical Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NFSA	National Fire Sprinkler Association
NGA	National Glass Association
NIBS	National Institute of Building Sciences
NIST	National Institute of Standards and Technology
NPCA	National Precast Concrete Association
NRCA	National Roofing Contractors Association
NSC	National Safety Council
NSF	National Sanitation Foundation
NSPE	National Society of Professional Engineers
NTMA	National Terrazzo and Mosaic Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing and Drainage Institute
PS	Product Standard (U.S. Department of Commerce)
RIS	Redwood Inspection Service
SDI	Steel Deck Institute
SFM	State Fire Marshal (California)
SFPE	Society of Fire Protection Engineers
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Society for Protective Coatings (Steel Structure Painting Council)
SSPWC	Standard Specifications for Public Works Construction
SWRI	Sealant, Waterproofing and Restoration Institute
TCA	Tile Council of America
TJC	The Joint Commission
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USS	United States Standard
WCLIB	West Coast Lumber Inspection Bureau
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

- D. Words and terms not otherwise specifically defined in this Section or in the Contract Documents, shall be as customarily defined by trade or industry practice, by reference

standard and by specialty dictionaries such as Dictionary of Architecture and Construction (Cyril M. Harris, McGraw-Hill Educational; 4th Edition, September 5, 2005).

- E. Additional abbreviations, used on the Drawings, are listed thereon.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 42 00

SECTION 01 45 00

QUALITY CONTROL

PART I - GENERAL

1.01 SECTION INCLUDES

- A. **Contractor's** Quality Control
- B. Quality of the Work
- C. Inspections and tests by governing authorities
- D. Inspections and tests by serving utilities
- E. Inspections and tests by manufacturer's representatives
- F. Inspections and Independent testing and Inspection Laboratories/Agencies
- G. **Contractor's** responsibilities in inspections and tests
- H. **Contractor's** responsibilities regarding the Owner's testing laboratory
- I. Test reports
- J. Geotechnical engineer

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 014100 – REGULATORY REQUIREMENTS: Compliance with applicable codes, ordinances and standards.
- C. Section 014550 – INSPECTION and TESTING of WORK
- D. Section 016100 – PRODUCT REQUIREMENTS: Product Options, substitutions, transportation and handling requirements, storage and protection requirements, and system completeness requirements.

1.03 CONTRACTOR'S QUALITY CONTROL

- A. **Contractor's** Quality Control: **Contractor** shall ensure that products, services, workmanship and site conditions comply with requirements of the Contract Documents by coordinating, supervising, testing and inspecting the Work and by utilizing only suitably qualified personnel.
- B. Quality Requirements: Work shall be accomplished in accordance with quality requirements of the Contract Documents, including, by reference, all Codes, laws, regulations and standards. When no quality basis is prescribed, the quality shall be in accordance with the best-accepted practices of the construction industry for the locale of the Project, for projects of this type.

- C. Quality Control Personnel: **Contractor** shall employ and assign knowledgeable and skilled personnel as required by contract or necessary if not prescribed to perform quality control functions to ensure the Work is provided as required.

1.04 QUALITY OF THE WORK

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.
- B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements and adjacent construction.
- C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling and staining, until Acceptance by Owner.
- D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report (ICC) requirements in preparing, fabricating, erecting, installing, applying, connecting and finishing Work.
- E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviation is acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by Owner's Representative and Owner's Consultant in accordance with provisions of the General Conditions of the Contract.
 - 1. **Contractor** shall cooperate by making Work available for inspection by Owner's Representative, Owner's Consultant or their designated representatives.
 - 2. Such verification may include mill, plant, shop, or field inspection as required.
 - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured, fabricated or stored.
 - 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by Owner's Representative or Owner's Consultant.
 - 5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the General Conditions of the Contract.
- G. Observations by Owner's Consultants: Periodic and occasional observations of the Work in progress will be made by Owner's Consultant and their consultants as deemed necessary to review progress of Work and general conformance with design intent.

- H. Limitations on Inspections, Tests and Observations: Neither employment of independent testing and inspection agencies nor observations by Owner's Consultant and their consultants shall relieve **Contractor** of obligation to perform Work in full conformance to all requirements of Contract Documents.
- I. Acceptance and Rejection of Work: Owner's Representative reserves the right to reject all Work not in conformance to the requirements of the Contract Documents.
 - 1. If initial tests or inspections made by Owner's Testing Laboratory or Geotechnical Engineer reveal any portion of the Work fails to comply with Contract Documents, or if it is determined that any portion of Work requires additional testing or inspection, additional tests and inspections shall be made as directed by Owner's Representative.
 - 2. If such additional tests or inspections establish such portions of the Work comply with Contract Documents, all costs of such additional testing or inspection will be paid by Owner.
 - 3. If such additional tests or inspections establish such portions of the Work fail to comply with Contract Documents, all costs of such additional tests and inspection shall be deducted from the Contract sum.
- J. Correction of Non-conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by **Contractor** at no change in the Contract Sum or Contract time.
- K. Acceptance of Non-Conforming Work: Acceptance of non-conforming Work, without specific written acknowledgement and approval of Owner shall not relieve **Contractor** of the obligation to correct such Work.
- L. Contract Adjustment for Non-conforming Work: Should Owner or Owner's Consultants determine it is not feasible or in Owner's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between Owner and **Contractor**. If equitable reduction in Contract Sum cannot be agreed upon, a Directed Change Order will be issued and the amount in dispute resolved in accordance with applicable provisions of the General Conditions of the Contract.

1.05 INSPECTIONS AND TESTS BY GOVERNING AUTHORITIES

- A. Regulatory Requirements for Testing and Inspection: Comply with California Building Code (CBC) requirements and all other requirements of governing authorities having jurisdiction.
- B. Inspections and tests by governing Authorities: **Contractor** shall cause all tests and inspections required by governing authorities having jurisdiction to be made for Work under this Contract.
 - 1. Such authorities include Owner's Building Inspection (code compliance), Fire Marshal's office and similar agencies.

1.06 INSPECTIONS AND TESTS BY SERVING UTILITIES

- A. Inspections and Tests by Serving Utilities: **Contractor** shall cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling, conducting and paying for such inspections shall be solely the **Contractor's** responsibility.

1.07 INSPECTIONS AND TEST BY MANUFACTURER'S REPRESENTATIVES

- A. Inspections and Tests by Manufacturer's Representatives: **Contractor** shall cause all tests and inspections specified to be conducted by materials or systems manufacturers, to be made. Additionally, all tests and inspections required by materials or systems manufacturers as condition of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum. Manufacturer's Representatives shall provide a PDF electronic report indicating but not limited to work or materials that are missing, not installed correctly, damaged or need correction. Manufacturer's Representatives shall issue a final PDF electronic report once all work and materials are installed correctly, functioning and in compliance with the Manufacturer's Warranty.

1.08 INSPECTION BY INDEPENDENT TESTING AND INSPECTION LABORATORIES

- A. Definitions:
 - 1. The term "Owner's Testing Laboratory" means a testing laboratory retained and paid for by Owner for the purpose of reviewing material and product reports, performing material and product testing and inspection, and other services as determined by Owner.
- B. Owner will select an independent testing and inspection laboratory or agency to conduct tests and inspections as called for in the Contract Documents and as required by governing authorities having jurisdiction.
 - 1. Responsibility for payment for tests and inspection shall be as indicated in the schedule below. All time and costs for **Contractor's** services related to such tests and inspections shall be included in Contract Time and Contract Sum.
- C. **Contractor** shall notify Owner, and if directed by Owner's Representative testing and inspection laboratory, when Work is ready for specified tests and inspections.
- D. **Contractor** shall pay for all additional charges by testing and inspection agencies and governing authorities having jurisdiction due to the following:
 - 1. **Contractor's** failure to properly schedule or notify testing and inspection agency or authority having jurisdiction.
 - 2. Changes in sources, lots or suppliers of products after original tests or inspections.
 - 3. Changes in means, methods, techniques, sequences and procedures of construction that necessitate additional testing, inspection and related services.

- E. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design. Test and inspections shall include, but not be limited to, the following:

List the applicable services required, for example:

Material Inspections and Tests		Paid by:
Concrete Reinforcement	Reinforcement Inspection	Owner
	Reinforcement Strength	Owner
Cast in Place	Slump Tests	Owner
	Compressive Strength Tests	Owner
Structural Steel	Welding Inspection	Owner
	High Strength Bolting Inspection	Owner

- F. Test and Inspection Reports: After each inspection and test, one (1) PDF electronic report shall be promptly submitted to Owner's Representative, **Contractor** and to agency having jurisdiction (if required by code).

1. Reports shall clearly identify the following:
 - a. Date issued
 - b. Project name and Project number
 - c. Identification of product and Specification Section in which Work is specified
 - d. Name of inspector
 - e. Date and time of sampling or inspection was conducted
 - f. Location in Project where sampling or inspection was conducted
 - g. Type of inspection or test
 - h. Date of tests
 - i. Results of tests
 - j. Comments concerning conformance with Contract Documents and other requirements
2. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
3. Samples taken but not tested shall be reported.
4. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
5. When requested, testing and inspection agency shall provide interpretations of test results.

6. Verification reports shall be prepared and submitted, stating tests and inspections specified or otherwise required for Project, have been completed and material and workmanship comply with the Contract Documents. Verification reports shall be submitted at intervals not exceeding six (6) months, at Substantial Completion of the Project, and at all times when Work of Project is suspended.

1.09 CONTRACTOR RESPONSIBILITIES IN INSPECTIONS AND TESTS

- A. Tests, inspections and acceptances of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Except as otherwise provided, **Contractor** shall notify Owner's Representative to make arrangements for such tests, inspections and acceptances. **Contractor** shall give Owner's Representative timely notice of all required inspections as outlined in Specification Section 014550 – INSPECTION and TESTING of WORK, Item 1.05, Scheduling Inspections – Notification Requirements.
- B. If such procedures for testing, inspection or acceptance reveal failure of any portion of the Work to comply with requirements of the Contract Documents, **Contractor** shall bear all costs made necessary by such failure including those of repeated procedures, including compensation for Owner's Consultant's services and expenses.
- C. If Owner and/or Owner's Consultants are to observe tests, inspections or make acceptances required by the Contract Documents, Owner and/or Owner's Consultant will do so promptly and, where practicable, at the normal place of testing.
- D. Cooperate with testing and inspection agency personnel, Owner, Owner's Consultant's and their consultants. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.
- E. Provide incidental labor and facilities to provide safe access to Work to be tested and inspected, to obtain and handle samples at the Project site or at source of products to be tested, and to store and cure test samples.

1.10 CONTRACTOR RESPONSIBILITIES REGARDING OWNER TESTING LABORATORY

- A. Secure and deliver to Owner's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.
- B. Submit to Owner's Representative the preliminary design mixes proposed for concrete and other materials, which require review, by Owner's Consultants and/or Owner's Testing Laboratory.
- C. Submit copies of product test reports as specified.

1.11 TEST REPORTS

- A. Owner's Testing Laboratory shall submit one (1) PDF electronic copy of all reports to the Owner's Representative, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

1.12 Owner will distribute one (1) PDF electronic copy of the reports to Owner's Consultants and **Contractor**. GEOTECHNICAL ENGINEER

- A. Owner will retain and pay the expense of a Geotechnical Engineer to perform inspection, testing and observation functions specified by Owner. Geotechnical Engineer will

communicate only with Owner. Owner's Representative shall then give notice to **Contractor**, of any action required of **Contractor**.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 45 00

SECTION 01 45 50

INSPECTION AND TESTING OF WORK

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Project Inspections and Procedures
- B. Scheduling Inspectors – Notification requirements

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013200 – CONTRACT SCHEDULES
- C. Section 013500 – SPECIAL PROCEDURES
- D. Section 014100 – REGULATORY REQUIREMENTS
- E. Section 014500 – QUALITY CONTROL

1.03 DEFINITIONS

- A. IOR: Inspector-of-Record
- B. FM: Fire Marshal
- C. TL: Testing Laboratory

1.04 PROJECT INSPECTIONS AND TESTING PROCEDURES

- A. Inspections: The following inspections will be requested on this project, as appropriate. Also see Part 3 for additional inspection items or Part 3
 - 1. Inspections required by the California Building Code
 - 2. Inspections listed on the Testing, Inspection and Observation (TIO) form
 - 3. Final inspections

- B. Procedures: Owner's Representative shall be the **Contractor's** contact for all inspection requests. **Contractor** shall fill out Inspection Request Form for all inspections.
1. **Contractor** shall properly plan and coordinate inspection requests. Schedule delays caused by **Contractor's** failure to plan and/or coordinate inspection requests will not be considered for adjustments to Contract Time or Contract Sum.
 2. A complete set of stamped and approved Contract Drawings and Contract Specifications, including applicable shop drawings and building permit shall be available on site for review by the Inspector-of-Record. The **Contractor**, Subcontractors and other responsible parties shall be present during inspection walk-throughs. All areas of project scope shall be ready and accessible for inspection. **Contractor** shall provide access equipment as applicable for the inspector's needs.
 3. A complete set of codes referred to in the approved plans must be maintained on the job at all times.
 4. **Contractor** shall submit verified compliance reports as outlined in the California Administrative Code, Section 7-151.

1.05 SCHEDULING INSPECTIONS –NOTIFICATION REQUIREMENTS

- A. Advance Inspection Notification: Owner's Representative for this project requires the following advance notifications to schedule appropriate inspection agencies at the project site.
1. IOR Inspection Request Notification: Twenty-four (24) hours. Note: Inspection requests received by 2:00 PM will be scheduled for next day inspection. Inspection requests received after 2:00 PM will be scheduled for the following day; (example: Inspection request received at 2:01 PM on a Monday would be scheduled for inspection on Wednesday). Weekend and off-hours inspection requests will be scheduled on a case-by-case basis with a minimum of seventy-two (72) hour inspection request notification.
 2. Testing Laboratory Inspections: Forty-eight (48) hours.
 - a. All testing laboratory and testing procedures must be scheduled by Owner's Representative. Inspections and/or testing directly scheduled by **Contractor** will not be accepted.
 - b. **Contractor** will bear all costs associated with unauthorized inspections and testing.
 3. Fire Marshal Inspection Request Notification: Seventy-two (72) hours.

B. Methods of Inspection Notification:

1. All inspection notifications shall be in writing using inspection forms located at back of this Section. Incomplete forms will be returned as non-compliant, and no inspection will be scheduled until all required inspection information is provided.
2. Emailed inspection requests will be accepted. Owner's Representative email address is Joseph.Cooper@lakecountycal.gov Notification time begins from the date and stamp of the email, provided it is sent during normal business hours. Emailed inspection requests sent after normal business hours and/or received on non-normal workdays, as defined in Specification Section 013100 – COORDINATION, paragraph 1.07.F.4.A will begin notification time starting at 7:00 AM the following normal business day.

C. Off-hours Inspection Requests: **Contractor** shall provide time windows for all off-hour or other than normal work hour inspections. Owner's Representative shall have final authority in setting times of off-hour inspections.

D. Re-inspections:

1. More than two (2) re-inspections: The cost of re-inspections of the same work, more than twice, shall be deducted from Contract Sum. Owner will provide itemized invoice for **Contractor's** records.
2. Work unprepared for inspection: Re-inspections of the same work scheduled by **Contractor**, but not ready for inspection will be identified as a re-inspection.

PART II - PRODUCTS – Not Applicable to this Section.**PART III - EXECUTION**

Note: Part 3 describes typical inspection requirements for each individual inspector's jurisdiction for non-HCAI projects. Part 3 is provided as a reference source for **Contractor's** use and Scheduling, as applicable. Part 3 is not intended to be all-inclusive and **Contractor** shall verify actual inspection requirements needed for this project. FIRE DAMPERS (Title 24, Part 2, Chapter 43)

Note: Manufacturer's installation instructions shall be used for inspections and testing.

- A. 1 Hour: IOR test 100%. Fire Marshal tests 100% or as needed.
- B. 2 Hour: IOR tests 100%. Fire Marshal tests 100%.
- C. Smoke: IOR tests 100%. Fire Marshal tests 100%.

3.02 FIRE SPRINKLERS (Title 24, Part 2, Volume 1, Chapter 9; NFPA Bulletin 13)

- A. Approved drawings shall be on jobsite from start to completion of project.
- B. Underground pressure test @ 200 psi.
- C. Fire Marshal to witness installation of underground lines.
- D. Fire Marshal to witness underground flush prior to connection.
- E. Hydro-test above ground piping @ 200 psi for two (2) hours.
- F. Inspection of hangers, bracing, and seismic joint crossing(s).
- G. Flow alarm test, tamper switch test.
- H. Fire pump test.
- I. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).
- J. Final inspection: signs in place, labeling, fire extinguishing system flow alarm test.

3.03 FIRE ALARM SYSTEM (Title 24; Part 9, Article 1006)

Note: Fire Sprinkler and Fire Alarm systems tests shall be performed in presence of Fire Marshal.

- A. Approved drawings shall be on jobsite from start to completion of project.
- B. Verify Emergency Power source.
- C. Activate all initiating devices.
- D. Certification by installer (Title 24, Part 9, Article 1006.3.4.2).
- E. Complete test of system per Title 24, Part 9, CFC, Article 1003.3.4.1).

3.04 MEANS OF EGRESS (Title 24, Part 2, Volume 1, Chapters 10)

- A. Exit sign/light locations and connected to two (2) sources of power.
- B. Normal Power.
- C. Emergency Electrical System, Life Safety Branch.
- D. Construction - floors, walls, ceilings, penetrations per listings.
- E. Electrical boxes - no back to back, 24 inches horizontal separation (Section 709).
- F. Electrical boxes - 100+ square inches to be wrapped/protected.
- G. Flame Spread, Fuel Contribution and Smoke Density for finishes (Chapter 8).

3.05 EMERGENCY LIGHTING

- A. Generator Test (Title 24, Part 3, Section 700-4; Section 701-5).
- B. Emergency lights - locations (Title 24, Part 2, Volume 1, Chapter 10, Section 1003.2.8.5).

3.06 MECHANICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 4)

- A. Mechanical Equipment Requirements
 - 1. Access to Equipment (Section 305, 405, 606.5, 815, 2.2.8, 903, 910.8, 1106.3).
 - 2. Labeling of Equipment (Section 307).
 - 3. Identification of Equipment - Area or Space Served (Section 304.5).
- B. Mechanical Testing
 - 1. Air balance completed and reviewed by Mechanical Engineer-of-Record.
 - 2. Hydronic balance completed and reviewed by Mechanical Engineer-of-Record.
 - 3. Air and Hydronic reports forwarded to Mechanical Engineer of Record.
 - 4. Fuel Gas line inspection (Part 4, Section 1406 and Appendix B, Chapter 16).
- C. Boilers
 - 1. Boiler – Operating Adjustments and Instructions (Section 1022).
 - 2. Boiler – Inspections and Tests (Section 1023).
 - 3. Boiler – Clearances/Permits (Section 1005.0).
- D. Ducts
 - 1. Installation - Bracing (Part 4, Section 604.1.4)
 - 2. Fire Damper test log from IOR (Part 4, Section 606.2).
 - 3. Fire Damper test by Fire Marshal (Part 4, Chapter 6, Section 606.2).
 - 4. Smoke Damper and Detector test log from IOR (Including Duct Detector tests).
 - 5. Smoke Damper and Detector by Fire Marshal.
- E. HVAC Unit Testing
 - 1. Verify correct filter types and efficiencies.
 - 2. Motor Rotation.
 - 3. Condensate drain tests (Section 310).
 - 4. Equipment shut down by smoke detectors (duct or space).

3.07 PLUMBING CHECKLIST FOR CLOSE-OUT (Title 24; Part 2, Chapter 29; Part 5)

A. Piping Systems (Title 24, Part 5)

1. Domestic Water Line Sterilization Test (Title 24, Part 2, Section 609.9; Title 22, Division 4, Chapter 16, Article 5).
2. Domestic Water System (hot, cold) Pressure test (Title 24, Part 5, 609.4).
3. Natural Gas Pressure Test (Title 24, part 5, Chapter 12, Section 1204).
4. Vent & Waste System Pressure test (Title 24, Part 5, 712.0).
5. Hydronic Water Pressure test (Title 24, Part 4 1201.2.8).

B. Water Heater Testing

1. Water Heater Temperature Test (Domestic).

3.08 ELECTRICAL CHECKLIST FOR CLOSE-OUT (Title 24, Part 3, and Part 1, Chapter 7, Section 7- 141, 7-149)

A. Main Panel/Service

1. Identification and Labeling of Equipment (110-21, 110-22, 230-70).
2. Grounding test and Certification (250, 250-56).
3. Ground fault interrupt test adjustment and certification [230-95(c); 517-17(c)].
4. Emergency power transfer switch test (700-4).
5. Panel load balance.

B. Emergency Power and Standby Systems (Article 700 & 701) [Test Logs from IOR]

1. Emergency Generator testing and certification (701-5).
2. Identification and Labeling of equipment (110-21, 110-22, 517-22).
3. Lighting and Lighting Levels (517-22).
4. Receptacles (410L, 517-13, 517-18, 517-19).
5. Exiting signs and lights [517-32(b), 517-42(b)].
6. Fire Alarm (760).

C. General Electrical Requirements

1. Working space/Headroom [Table 110-26(a); 110-33; 110-34].
2. Circuits and lights tested (410-45).
3. Receptacle polarity and grounding [200-10(b)].

4. Isolated ground monitor test [517-160(b)].
5. Motor load current adjustment.
6. Identification and Labeling of equipment (110-21; 110-22).
7. Identify circuits (517-19).

D. Miscellaneous Electrical Requirements

1. Test logs from Contractor and Inspector-of-Record.
2. Electrical Engineer-of-Record acceptance of system.
3. Owner In-Service training on Equipment.
4. Equipment Manuals and Instruction to Owner.
5. Warrantees and Equipment Certification.
6. As-Built documents to Owner.

3.09 FIRE MARSHAL INSPECTION REQUIREMENTS

A. Framing Inspections

1. Structural members in fire-resistive construction.
2. Check fireproofing per approved design tested assembly description.

B. Fire-Rated Partition Locations

1. Check for stud and nailing/screwing spacing per approved design tested assembly description.
2. Check for fire blocking in combustible construction.
3. Check for rated door/window frame installation (manufacturer's installation instructions shall be available for review).
4. Check for electrical installation, for example, number and size of electrical boxes, panels, cabinets, etc.
5. Check hangers, seismic bracing for sprinkler piping installation, if applicable (this would be checked during overload pressure test inspection phase of sprinkler system).

C. Close-In Inspections

1. Check fire-blocking and draft stops in combustible construction.
2. Check gypsum board installation in accordance with approved design assembly description for rated assembly.
3. Check integrity of firewall construction where recessed cabinets, panels, excessive electrical/plumbing are installed.

4. Check fire damper installation (manufacturer's installation instructions shall be available for review). Fire Marshal will witness actuation of minimum 10% fire dampers installed and 100% in 2 hour or greater fire rated wall assemblies.
5. Check for through-penetrations and fire-stop systems in all walls or floor/ceiling assemblies.
 - a. Check top of wall to structure fire stopping.
6. Check above ceiling areas and construction prior to installation of ceilings.
 - b. Check access and serviceability for above ceiling to included but not limited to valves, mechanical equipment, electrical equipment and other components that require adjustment, access or service.
 - c. Contractor shall move any items including but not limited to conduit, piping, braces and other obstructions that block access to equipment and components needing adjustment, access or service.
 - d. Check bracing, anchorage, fasteners and installation.

D. Final Construction Inspections

1. Final project walk-through: Example, Emergency lighting will be tested to verify exit illumination of both interior and exterior, while generator (if applicable) is tested at same time.

3.10 Refer to the following attachment.

- A. Inspection Request
- B. Non-conforming Work Notice

END OF SECTION 01 45 50

INSPECTION REQUEST

Project #: _____ Inspection #: _____ IR #: _____ [Contractor] [Design-Builder] IR #: _____ Date: _____
 Project _____ Spec Section _____

Name: _____ (s): _____

To: LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY	
Project Manager	_____
Joseph Cooper	_____
Email: Joseph.Cooper@lakecountycal.gov	P: _____
	E-mail: _____

Drawing Ref.: _____ Detail: _____ Shop Drawing: _____

Project Schedule Activity ID No.: _____ Date of Inspection: _____ Time Requested: _____

Type of Inspection: _____
 Location of Inspection (i.e., Floor, Column Line, etc.): _____

*Re-inspection Requested for Previous IR #: _____

All work Requested for Inspection has been reviewed for compliance with the contract documents by [Contractor][Design- Builder]'s Superintendent prior to notification of Inspection Request.

Signed: _____ Date: _____

OWNER USE ONLY

Date Received: _____ Time of Inspection: _____

Date of Inspection: _____ Inspector: _____ ☐ Inspection Report Attached

Inspector Arrival Time: _____ Inspector Departure Time: _____

Comments: _____

☐ Approved ☐ Approved as Noted ☐ Not Approved ☐ Cancelled

Inspection Request Notes or Description of Items of Deficiency if needed below (Part 1, Chapter 7, Section 7-145, item 6)

Project Field Record of Construction Progress Summary of Work in Progress (Part 1, Chapter 7, Section 7-145, item 6)

Project Phase (Building Foundation, Structural, Wall Framing, Electrical Rough-In, Sprinkler Rough-In, etc.)

Project Phase Percentage Complete (% of the phase completed):

Overall Project Percentage Complete:

NON-CONFORMING WORK NOTICE

PROJECT NAME: _____ JOB #: _____ Notice #: _____ Date: _____

To: [PROJECT MANAGER NAME/EMAIL] _____ [DESIGN PROFESSIONAL NAME/EMAIL] _____ [PROJECT #, AREA COMPLIANCE OFFICER/EMAIL] _____ _____ _____	From: IOR _____
--	---

Spec Section Ref.: _____ Paragraph: _____ Drawing Ref.: _____

Detail: _____

In accordance with Article 12 of the General Conditions, the following defective condition(s) has/have become apparent:

Reported by: _____

CORRECTIVE ACTION SHOULD BE TAKEN AS SOON AS POSSIBLE AND COMMENCE NO LATER THAN TEN (10) CALENDAR DAYS AFTER THIS NOTICE. COORDINATE THE VERIFICATION OF THE CORRECTIVE ACTIONS WITH THE INSPECTOR OF RECORD. IF FURTHER INFORMATION IS NEEDED, ADVISE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH THE GENERAL CONDITIONS.

Description of corrective action taken: _____

Accepted by: _____ Date: _____

CC:

SECTION 01 51 00
TEMPORARY UTILITIES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Temporary Power and Lighting.
- B. Temporary Heating, Cooling & Ventilation.
- C. Temporary Water.
- D. Temporary Fire Protection.
- E. Temporary Telephone, Data, and WIFI.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and controls, to accommodate the Owner's occupancy and use of the areas and spaces adjacent to construction.
- C. Section 017400 – CLEANING
- D. Section 017700 – CLOSEOUT PROCEDURES

1.03 TEMPORARY UTILITIES

- A. Temporary Connections: Temporary power, water, sewer, gas and other utility services necessary for the Work may be made to existing building systems. Connections shall be subject to Owner's review and written approval. Coordinate with utility companies and Owner's Plant Operations & Maintenance Department for locations and methods of connections.
- B. **Contractor** shall provide and pay for installation, operation, maintenance, and removal of all utilities. The services will be provided at the current rates for each utility.

1.04 TEMPORARY POWER AND LIGHTING

A. Service Requirements:

1. Temporary Electrical Service: **Contractor** shall provide and pay for installation, operation, maintenance, and removal of temporary electrical service, lighting devices and restoration of existing and permanent equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California. Use of Owner's electrical power and lighting system is prohibited without Owner's written approval and will be considered only when an alternate electrical power source is unavailable.
 - a. Install initial services at time of site mobilization.
 - b. Modify and extend systems as Work requires.
 - c. Maintain electrical system to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
 - d. Restore existing and permanent lighting used during construction to original condition. Replace defective fixtures, bulbs, and other component parts.
 - e. Clean existing and permanent lighting fixtures used during construction per Section 017400 – CLEANING.
2. Distribution: **Contractor** shall provide distribution network for temporary electrical power.
3. Power Source: Arrange for service with Owner's Plant Operations and Maintenance Department, or local utility company.
4. Conformance: All temporary wiring and electrical facilities shall be in accordance with applicable provisions of Electrical Safety Orders of the State of California.
5. Temporary Lighting: Construction lighting shall be supplied and maintained by **Contractor** at **Contractor's** expense. Sufficient lighting levels shall be provided to allow construction to be properly and safely performed. **Contractor** shall give special attention to adequate lighting for stairs, ladders, floor openings, basements and similar spaces. Promptly replace burnt out, worn or defective parts.
6. Lighting fixtures: Locate fixtures in areas of Work: One (1) lamped fixture in rooms, except closets and utility chases; one (1) lamped fixture for every 750 square feet in large areas.
7. Security Lighting: **Contractor** shall provide security lighting during hours of low visibility.

B. Distribution requirements:

1. Weatherproof distribution boxes with one (1) - 240-volt, three (3) phase power outlet and four (4) – 120-volt outlets consisting of 100 amperes fused switches with equipment ground, spaced so a 100-foot extension cord will reach all areas of building.
2. Wiring, connections and protection for temporary lighting.
3. Wiring connections and protection for temporary and permanent equipment, for environmental control, for temporary use of electricity operated equipment, and for testing.

C. Use of Owner System: If alternate electrical power and lighting sources are unavailable, Owner may permit **Contractor** to use existing, in-place electrical system. Owner does not guarantee availability of electrical power or adequate lighting levels through use of existing system. If power and lighting is insufficient or not available **Contractor** shall provide secondary source (i.e., generator) as approved by Owner.

1. It is expressly understood and agreed by **Contractor** that Owner existing power and lighting system's primary obligation is servicing patient care. The Owner system is not designed for purposes of construction activities.
2. **Contractor** should expect power and lighting interruptions during course of Work. **Contractor** will be required to cease use of Owner electrical-power and lighting systems, as required by the needs of Owner.
3. When use of Owner electrical system is approved in writing, **Contractor** is required to adhere to Owner's electrical lockout procedures. See Division 26– Electrical or Campus Design Guidelines.
 - a. Provide and maintain warning labels on energized equipment.
 - b. Replace plates, electrical devices or similar existing items or components damaged as a result of temporary usage.

1.05 TEMPORARY HEATING, COOLING AND VENTILATING

A. Service Requirements:

1. **Contractor** shall provide temporary heat as necessary for proper installation of all work and to protect all work and materials against injury from dampness and cold and to dry out building. Fuel, equipment and method shall be approved in writing by Owner's Representative.
2. Install initial services at time of site mobilization. Modify and extend systems as Work requires.
3. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
4. Use of permanent heating system is preferred to any other system for maintaining temperature of building during installation of finish materials, but such use will not be permitted before clean-up after plastering and/or drywall work has been completed. **Contractor** shall make every effort to complete permanent heating

system in time for such use. Permanent fans shall not be used before filters are installed. Filters shall be cleaned and serviced by **Contractor** just prior to final acceptance.

- a. Vent portable units to building exterior, complete with automatic controls. Direct-fired units are not allowed. Locate units and outlets to provide uniform distribution of heating, cooling and ventilating.
 - b. Operate and maintain existing equipment being used; clean or replace filters and install filters in duct extensions as necessary to maintain occupied areas, work areas and finished areas, in specified condition.
 - c. Prior to operation of permanent equipment, verify controls and safety devices are complete, equipment has been tested, and inspection made and approved for operation.
 - d. Remove temporary materials and equipment when permanent system is operational. Restore existing and permanent systems used for temporary purposes to original condition.
 - e. Install temporary filters in air handling units and ducts, replace as necessary to prevent dust in equipment and ducts, to avoid contaminants in Work or finished areas. After completion, replace temporary filters with new, clean, reusable filters.
5. Maintain temperature, humidity, and ventilation in enclosed areas to provide ambient conditions for storage, preparation and Work; to cure installed materials, to prevent condensation, to dry floor surfaces and to prevent accumulations of dust, fumes and gases.
 6. During non-working hours maintain temperature in enclosed areas occupied solely by **Contractor** at a minimum of 50°F., or higher as specified in individual Sections and by individual product suppliers and manufacturers. Areas occupied in whole or in part by Owner are to be maintained at normal temperatures.

B. Utility Sources:

1. Electrical: As specified above in Item 1.04.
2. Existing mechanical systems may be used for temporary purposes. Coordinate use with Owner for conditions to be maintained in adjacent Owner occupied areas.
3. **Contractor** shall provide and pay for all installation, operation, maintenance, and removal of equipment in accordance with applicable provisions of the Electrical Safety Orders of the State of California.

1.06 TEMPORARY WATER

A. Service Requirements:

1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner's systems when temporary service is connected.
2. Water service, if necessary for construction, can be made available at no expense to the **Contractor** provided the water is not wasted. **Contractor** shall be responsible for distribution of water to points of use.
3. Certified reduced pressure type back-flow prevention device as submitted to and approved by Owner shall be installed before water is obtained from an Owner facility fire hydrant or interior building connection.

B. Plumbing: Maintain system to provide continuous service with adequate pressure to outlets, including Owner system when temporary service is connected. See also Division 1 Approvals.

1. Size piping to supply construction needs, temporary fire protection, and for Owner's needs when existing service is connected.
2. Disinfect piping used for drinking water. See Division 33 and 22 for requirements or Campus Design Guidelines
3. Source: Owner existing service, connect at locations as directed by Owner.
4. Provide valved outlets to control water pressure adequately for hoses.
5. Fire hydrants used for water supply for construction – **Contractor** must use only $\frac{7}{8}$ " square hydrant wrench on square operating nut and must use only pentagon wrench on pentagon operating nut. This is to prevent damage to the hydrant operating nut. Any damage caused by the use of an improper wrench or other misuse of the hydrant must be repaired at contractor expense. **Contractor** must inspect hydrant prior to use and make the Owner aware of any pre-existing damage.

- C. Use of Existing System: Existing system may be used for temporary water. Monitor usage to prevent interference with Owner's normal operational requirements.
- D. Use of Permanent System: **Contractor** shall obtain written agreement from Owner establishing start of warranty period and conditions of use.
- E. **Contractor** shall pay for installation, operation maintenance and removal of system and restoration of existing and permanent equipment. Owner will pay costs of water consumed for normal construction operations. **Contractor** shall take measures to conserve usage.

1.07 TEMPORARY FIRE PROTECTION

- A. Requirements:
 - 1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
 - 2. Provide and maintain fire protection equipment including extinguishers, fire hoses and other equipment as necessary for proper fire protection during course of the Work.
 - 3. Use fire protection equipment only for fighting fires.
 - 4. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings and throughout construction site. In area under construction, provide at least one (1) fire extinguisher for each 5,000 square feet of building floor area. Locate fire extinguishers so that a person never has to walk more that seventy-five (75) feet to obtain one.
 - 5. Assign qualified person with authority to maintain fire protection equipment, institute fire prevention measures, and direct prompt removal of combustible and waste material. Submit ILSM requirements per Specification SECTION 013500 – SPECIAL PROCEDURES.

1.08 TEMPORARY TELEPHONE, DATA, INTERNET, and WIFI

- A. Service Requirements:
 - 1. Maintain systems to provide continuous service, including prompt restoration of interruptions to Owner systems when temporary service is connected.
 - 2. **Contractor** shall select from the following options:
 - a. Owner shall provide conduit, cabling and dial tone to **Contractor's** location(s). **Contractor** shall pay Owner for cable, conduit installation and later removal of same and also pay Owner a monthly fee for use of Owner telephone, data internet, and WIFI system.

- b. Owner shall provide conduit and cabling to **Contractor's** location(s). **Contractor** shall receive dial tone from local utility. **Contractor** shall pay Owner for cabling, conduit installation, maintenance of same and later removal of same. **Contractor** shall pay local utility for monthly telephone, data, internet and WIFI service.
- 3. **Contractor** shall select number of lines, instruments and other features.
- 4. **Contractor** shall prepare and submit to Owner an itemized request for telephone lines (according to option 2a or 2b above) and internet service. Project Manager will submit a service request to the IT department.
- B. Use of Existing System: Existing Owner telephone system shall not be used for temporary telephone service.
- C. **Contractor** Phone:
 - 1. **Contractor** shall have telephone emergency number or other facility available at **Contractor's** business office for duration of contract where contractor and superintendent may be contacted within twenty-four (24) hours. Provide emergency numbers to Owner.
- D. Telephones:
 - 1. **Contractor** shall use, and only permit to be used, FCC approved communication devices on frequencies approved by FCC and Owner.
 - 2. **Contractor** shall not use, or permit to be used, communication devices which interfere with existing Owner communication systems, including, but not limited to:
 - a. Life Flight or CHP helicopters.
 - b. Emergency Service vehicle communications.
 - c. Microwave transmission stations.
 - d. Cellular or other mobile phone systems.

- E. Temporary Internet Service: Provide a high-speed internet connection (Min. 20 Mbps download, 10 Mbps upload) to Contractor's field offices. The Contractor's field office shall be capable of sending and receiving e-mail and be able access the Internet.
 - 1. **WIFI coverage at the above internet speeds will be provided throughout the jobsite.**

PART II - PRODUCTS

2.01 MATERIALS

- A. May be new or used, adequate to the purpose.
- B. Devices and Equipment: Standard devices, meeting UL requirements.
- C. Telephones: may be product of local service company or specialty devices compatible with service company requirements.
- D. Modems compatible with internet service.

PART III - EXECUTION

3.01 INTERRUPTION OF EXISTING SERVICES

- A. No existing utility services shall be interrupted at any time without prior written approval from the Owner. Required shutdowns shall be scheduled a minimum of fourteen calendar days prior to actual shutdown. The operation of valves, switches, etc. will be performed and paid for by Owner.
 - 1. Prior to the outage, all possible Work shall have been completed which will minimize the length of the required outage. During the outage, the Work will be prosecuted with diligence by an adequate number of skilled personnel.
 - 2. Provide and pay for all personnel required by the Owner to maintain safe conditions during the outage including but not limited to fire watch, safety monitors and/or traffic control. Coordinate Work with Owner's Representative.

3.02 REMOVAL OF TEMPORARY CONSTRUCTION

- A. At the completion of the Work, the Contractor shall remove from the Project site all temporary utilities and services construction. Leave the Project site clean and free from debris, materials, or equipment.

END OF SECTION 01 51 00

SECTION 01 52 00
CONSTRUCTION FACILITIES

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Field Offices and Sheds
- B. Temporary Facilities
- C. Temporary Sanitary Facilities

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner continued use of the areas and spaces adjacent to construction.
- C. Section 017400 – CLEANING
- D. Section 017700 – CLOSEOUT PROCEDURES

1.03 FIELD OFFICES AND SHEDS

- A. Field Office: **Contractor** shall provide a job office that will conform to the following minimum requirements:
 - 1. Suitable space for Workstations, drawings, specifications, samples and other project records.
 - 2. Conference space for eight (8) persons, including layout tables.
 - 3. Heating and cooling to maintain a reasonable working environment.
 - 4. Telephone, Data and WIFI service as specified in Section 015100 – TEMPORARY UTILITIES
 - 5. Furnishings required: Conference table and chairs; racks and files for Contract Documents, submittals, and project record documents. Other furnishings are at **Contractor's** option.
- B. Installation: Install office spaces for occupancy fifteen (15) calendar days after date of Owner/**Contractor** agreement.
- C. Preparation: Fill and grade sites for temporary structures to provide drainage away from buildings.

- D. Contract Documents: Complete set of Contract Drawings and Contract Specifications shall be kept continuously at the site. Copies of all Change Orders, letters, Shop Drawings, etc., shall be kept on the jobsite at all times and shall be available for inspector's use.
- E. Contact numbers: **Contractor** shall provide telephone numbers where **Contractor** may be reached at all times during normal working hours and after normal working hours, if emergency problems develop that require **Contractor's** assistance.
- F. Storage Sheds and Containers for Materials, Tools and Equipment: If requested, Owner will provide space outside construction site where **Contractor** may provide and locate weather-tight sheds or containers for storage of construction materials, tools and equipment. **Contractor** shall be solely responsible for security of such sheds and containers. Size storage requirements to allow access, orderly provision of maintenance and inspection of products.
- G. Cleaning: Weekly janitorial services for offices; periodic cleaning and maintenance for office and storage areas. **Contractor** shall keep construction loading and parking areas clear of construction debris, especially debris that may cause slipping or tripping hazard that may injure vehicle tires, that may stain surfaces, and that may be tracked into existing buildings. Maintain approach walks free of mud and water.
- H. Removal: Upon completion of the work, and before the final payment, **Contractor** shall remove all temporary work and facilities and return site to condition required by the General Conditions of the Contract and at no change to the Contract Sum or the Contract Time.

1.04 TEMPORARY FACILITIES

- A. **Contractor** shall provide and maintain the following temporary facilities as required for execution of the Work:
 - 1. Scaffolding, staging, runways and similar equipment.
 - 2. Hoists or construction elevators, complete with operators, power and signals required.
 - 3. Temporary rigging, rubbish chutes, barricades around openings, ladders between floors, and similar equipment.
 - 4. Barricades, fencing, lights and similar safety precautions.
 - 5. Security cameras for remote video surveillance of the project site and 24/7 monitoring services that records and reports incidents and alarms. Security cameras to provide full coverage of the construction and storage site area.

- B. Maintenance: Use all means necessary to maintain temporary construction facilities and controls in proper and safe condition throughout progress of the Work.
- C. Replacement: In event of loss or damage, promptly restore temporary construction facilities and controls by repair or replacement at no change to the Contract Sum or the Contract Time.
- D. Conformance: All materials and equipment required to safely accomplish work under this Section shall be in conformance with requirements of CAL OSHA and other State and Federal Codes and regulations where applicable.
- E. Codes: All temporary work and facilities shall conform to the above requirements that pertain to operation, safety and fire hazard.
- F. Construction Site Security: Temporary barriers, doors and gates shall be keyed to Owner's master lock system. Security hardware to be provided by **Contractor**. Keying to Owner master lock system will be provided by Owner.

1.05 TEMPORARY SANITARY FACILITIES

- A. Use of existing facilities: Designated toilet facilities may be used by **Contractor**.
 - 1. Assigned facilities: Location of assigned toilet facilities and maintenance of same are responsibility of Owner. **Contractor** shall not have exclusive use to these facilities and shall abide by health and safety criteria regarding their use and sanitary upkeep.
 - 2. Unassigned facilities: Unassigned toilet facilities shall not be used without written authorization of Owner's Representative.
 - 3. **Contractor** may use existing toilet facilities that are within the limits of the Work.
- B. **Contractor** shall pay service charges for connection and use of sewage utilities.
- C. Portable units: Enclosed, portable, self-contained units or temporary water closets and urinals, secluded from public view may be used. Self-contained units shall be approved by Owner's Representative prior to use.
 - 1. **Contractor** shall pay costs of installation, maintenance and removal of temporary sanitary facilities.
 - 2. Provide facilities at time of site mobilization.
 - 3. Modify and extend services as work progress requires.
 - 4. When utility services are available, provide water, sewer service, and temporary water closets; remove portable facilities. Remove temporary fixtures when permanent facilities are operational.
 - 5. Clean areas of facilities daily, maintain in sanitary condition. Disinfect fixtures, repair or replace damaged fixtures, accessories and surfaces.
 - 6. Provide toilet paper, paper towels, and soap in suitable dispensers.

7. Restore existing and permanent areas and facilities used to original condition. Remove all temporary construction facilities above and below grade. Leave the project site clean and free of debris, materials and equipment.

PART II - PRODUCTS

2.01 MATERIALS

- A. Serviceable, new or used, adequate for required purpose.

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 52 00

SECTION 01 55 00
VEHICULAR ACCESS AND PARKING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Parking and Access Roads
- B. Traffic Regulation
- C. Project Informational Signs

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Section 013500 – SPECIAL PROCEDURES: General requirements for temporary facilities and temporary controls to accommodate Owner's continued occupancy and use of the areas and spaces adjacent to construction.
- D. Section 017400 – CLEANING
- E. Section 017700 – CLOSEOUT PROCEDURES: Project Closeout.

1.03 PARKING AREAS AND ACCESS ROADS

- A. Access Roads: Existing roads shall be used for construction access within limits defined herein. Temporary construction access roads shall not be permitted.
- B. Parking: Parking is controlled and limited by Owner.
 - 1. Parking of personal vehicles belonging to **Contractor** employees may be arranged at the project site with Owner's Project Manager Approval. Parking will be allowed in employee permit areas, at the current permit rates depending on space availability.
 - 2. Delivery of materials may be made to the job-site as required. **Contractor** shall coordinate with Owner's Representative.
 - 3. Dumpsters shall be located in approved location as arranged by Owner's Representative.
- C. Existing Pavements and Parking Areas: Designated existing on-site streets and driveways may be used for construction traffic. Vehicles with metal tracks will not be allowed.
 - 1. Designated areas of existing parking facilities may be used by construction personnel. Do not allow heavy vehicles or construction equipment in parking areas.

2. Maintain traffic and parking areas in a sound condition, free of excavating material, construction equipment, products, mud, snow and ice.
3. Maintain existing and permanent paved areas used for construction. Repair existing facilities damaged by usage to original condition: promptly repair breaks, potholes, low areas, standing water and other deficiencies, to maintain paving and drainage in original or specified condition.
4. Remove temporary materials and construction when permanent paving is usable.

1.04 TRAFFIC REGULATION

- A. Schedule of Access Closing: **Contractor** shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. **Contractor** shall provide schedule of planned closing of any street for approval by Owner and shall give minimum of fourteen (14) calendar days' notice before closing any street or access.
- B. Use of Fire Lanes: **Contractor** shall notify Owner of all major pickups and deliveries that require use of controlled access fire lanes. Keys to gates or other barriers will be provided, as needed, to allow use of fire lanes. Vehicles parked in fire lanes for delivery of materials shall be continuously manned for immediate removal if required by the Owner.
 1. Fire Lanes to remain open at all times and shall not be blocked without a Traffic Control Plan provided prior to work at the Fire Lane and approved by the Owner's Representative.
- C. All major pick-up and delivery operations shall occur in total before or after normal working hours.
 1. Drawings may indicate haul routes designated by Owner for use of construction traffic. Confine construction traffic to haul routes.
 2. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.
- D. Post-mounted and wall-mounted traffic control and informational signs as specified herein.
 1. Traffic Control Signs, Traffic Message Boards, Cones, Drums, Flares, Lights and Flag Control equipment: All as approved by California MUTCD requirements.
 2. **Contractor** shall furnish at all barricades: Lights and flag control required to control traffic, and shall also provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for protection of the public; and maintain from the beginning of twilight throughout the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public and/or the Work.
- E. Construction Vehicle Parking: Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations. Prevent parking on or adjacent to roads or in non-designated areas.

- F. Flag Control: Provide properly trained and equipped flagmen to regulate vehicular traffic when construction operations or traffic encroach on public traffic ways.
 - 1. Provide properly trained and equipped personnel to regulate pedestrian traffic at all interior locations where construction traffic interfaces with Owner traffic.
 - 2. Flag control personnel shall wear appropriate identifying clothing such as bright colored vests, clearly visible and identifiable as having responsibility for traffic control.
- G. Lights: Use lights during hours of low visibility to delineate traffic lanes and to guide traffic.
- H. Traffic Signs and Signals: At approaches to site and on site, install traffic signs and signals at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
 - 1. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under **Contractor's** control, and areas affected by **Contractor's** operations.
 - 2. Relocate traffic signs and signals as Work progresses, to maintain effective traffic control.
 - 3. Remove equipment and devices when no longer required. Repair damage caused by installation.

1.05 PROJECT INFORMATIONAL SIGNS

- A. Project Identification Sign: **Contractor** shall provide one (1) project sign. Sign will consist of one (1) 8' x 4' x 3/4" exterior grade plywood with medium or high-density phenolic sheet overlay, painted plywood sign on fence area at construction field office or yard.
 - 1. Information on sign shall include PROJECT NAME, Owner Name, Owner's consultants, etc. Copy will be provided by the Owner.
- B. Painted Informational Signs: Provide at each field office, storage shed and yard, directional signs to direct traffic into and within site. Relocate as Work progress requires.
- C. Maintain signs and supports: Clean, repair deterioration and damages.
- D. Remove signs, framing, supports and foundations at completion of Project and restore the area.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION – Not Applicable to this Section

END OF SECTION 01 55 00

SECTION 01 56 00

TEMPORARY BARRIERS, ENCLOSURES and CONTROLS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Barriers and Enclosures
- B. Protected Walkways and Weather Closures
- C. Tree and Plant Protection
- D. Temporary Controls

1.02 RELATED SECTIONS

- A. Section 011000 – SUMMARY OF THE WORK
- B. Section 017400 – CLEANING

1.03 BARRIERS AND ENCLOSURES

- A. Barricades: Provide to prevent public entry, to protect existing trees and plants, and to protect existing facilities and adjacent properties from damage during construction period. Relocate and extend as construction progress requires.
- B. Partitions and Ceiling Enclosures:
 - 1. Fire Enclosures-Rated-Corridors and Rated Assemblies: Provide non-combustible dust-proof barrier framed with 20-gauge metal studs spaced 24" o/c maximum and covered on both sides with 5/8" thick Type-X rated gypsum wallboard fire taped, braced so to be self-supporting without fastening to existing finishes.
 - a. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finish.

- b. Finish exposed surfaces with two (2) coats of paint (color as selected by Owner), maintain in neat, orderly appearance and paint barrier on public side. Temporary emergency exit and or directional signage indicating Emergency Exits will be furnished and installed by **Contractor**.
 - c. Provide temporary doors in corridors with twenty (20) minute fire-rated assemblies and locksets to limit use.
 - d. Use of access doors and routes by workmen to be approved by Owner's Representative.
- 2. Fire Retardant Enclosures - Non-Rated Assemblies: Provide non-combustible dust-proof barriers framed with metal studs and covered on public side with Fire Retardant plastic laminate sheathing material. Flame spread 10 - smoke development 45 - fuel contribution undeterminable, as manufactured by Reef Industries, Inc., P.O. Box 33248, Houston, TX77033 or equal.
 - a. Joints shall be taped and sealed over framing studs.
 - b. Bracing shall be self-supporting without fastening to existing finishes.
 - c. Provide gaskets of closed cell neoprene, or strips of fiberglass insulation between barriers and existing finishes.
 - d. Provide non-staining taped seal to surrounding materials to insure seal.
 - e. Non-Rated Assemblies for Dust Control: Use ½" Type-X or equal gypsum wallboard applied on occupancy side on framing member. Joints over studs shall be taped and sealed. Other detail similar to 1.03-B.2 above.
- C. Removal: Remove temporary materials, equipment and construction at completion; repair damage caused by installation or use of barricades and enclosures. Restore existing facilities used during construction to specified or to original condition.

1.04 DIESEL VEHICLE/EQUIPMENT IDLING PROCEDURES

- A. When drivers of diesel powered on-road vehicles arrive at loading or unloading areas to drop-off or pick-up passengers, supplies, equipment, materials, etc., they shall turn off their vehicle's engine as soon as possible but no later than five minutes after arrival.
- B. Operators of off-road diesel-powered equipment shall turn off their engines when the equipment is not performing its primary function, but no later than five minutes after the equipment has come to a stop.
- C. Idling for "warm-up" prior to diesel vehicle or equipment operations on Owner property shall be limited to a maximum of five minutes.
- D. At end of work shift, or for the purpose of servicing, all diesel equipment shall be parked on site at furthest location away from Facility air intake systems.
- E. All diesel-powered equipment shall be maintained in good operating condition. Owner representative will direct **Contractor** to remove any equipment producing high amount of diesel fumes resulting from diesel equipment being old or in poor operating condition.

1.05 PROTECTED WALKWAYS AND WEATHER CLOSURES

- A. Cover walkways to provide access to existing facilities for use by public and Owner personnel.
- B. Provide temporary roofing and weather-tight insulated closures of openings in exterior wall surfaces, to maintain specified working conditions, to protect products and finished work from inclement weather.
- C. Critical access and protected walkways shall comply with the CBC and CFC.

1.06 TREE AND PLANT PROTECTION

- A. Tree Protection: All trees not marked for removal shall be protected against damage from construction operations. Where necessary, in the opinion of Owner's Representative, trees surrounding building footprint or in close proximity to construction operation shall be protected with barricades. No trees shall be cut or felled without approval of Owner's Representative. Trees cut and/or removed without explicit instruction shall be replaced by **Contractor** at no cost to the Owner.
- B. Cutting and Pruning: Cutting and pruning of trees to accommodate construction shall be done only with approval and direction by Owner's Representative. Soil within the spread of tree branches (within drip line) shall not be disturbed except as directed by excavation or trenching drawings. Advance notice shall be given Owner if tree roots of 3" diameter or greater must be cut.
- C. Drip line Protection: Cars, trucks, or equipment shall NOT be parked or set within the drip line of any tree; nor shall there be any stockpiling or temporary building erected within the drip line.

1.07 TEMPORARY CONTROLS

- A. Dust Control: **Contractor** shall take appropriate steps throughout project to prohibit airborne dust due to work under this contract. Execute work by methods to minimize raising dust from construction operations. Water shall be applied wherever practical to settle and hold dust to minimum, particularly during demolition and moving of materials. No chemical dust prohibitor shall be used without written approval by Owner's Representative.
- B. Noise Control: Control noise as directed by Owner's Representative.
- C. Pollution Control: Use of noxious or toxic materials for all applications in alterations or work in buildings occupied by Owner personnel shall be done after proper notification and approval by Owner, this includes work performed on weekends or other unoccupied times.
 - 1. Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.

- D. Waste Control: All waste materials resulting from process of clearing and construction shall be disposed of as follows:
1. General Refuse: All refuse and debris, combustible and incombustible, resulting from construction process, shall be removed from Owner property as described in the General Conditions of the Contract. **Contractor** shall not use any refuse container belonging to Owner.
 2. Hazardous Refuse: Solvents, oils and any other hazardous material shall be disposed of in containers and removed from site. At completion of work, any contaminated soil shall be removed and replaced with good soil by **Contractor** at no expense to Owner. Coordinate disposal with Lake County EH&S department.
 3. Building materials containing asbestos that are part of the project shall not be disturbed or removed by the contractor during the construction of temporary barriers, enclosures and controls. The contractor shall request from the Owner's Representative materials that have been identified on the project to contain asbestos so that these materials are not disturbed. The contractor shall refer to Hazardous Materials Procedures regarding materials impacted by construction of temporary barriers, enclosures and controls.
- E. Drainage Control: All portions of Work shall be kept free of standing water at all times during construction. Where required, temporary drainage ditches, berms, or pumping systems shall be constructed to divert drainage water from construction site, and resultant water shall be carried to nearest natural water course and disposed of without erosion to surrounding area. Care shall be taken to prevent silting of existing sinkholes and watercourses. Silt deposited as a result of the Work shall be removed and disposed of by **Contractor** at no cost to the Owner.
1. Rough grade site to prevent standing water and to direct surface drainage away from excavations, trenches, adjoining properties and public rights-of-way/s.
 2. Maintain excavations and trenches free of water. Provide and operate pumping equipment of a capacity to control water flow.
 3. Provide de-watering system and pumping to maintain excavations dry and free of water inflow on a twenty-four (24) hour basis.
 4. Provide piping to handle pumping outflow to discharge in manner to avoid erosion or deposit of silt. Provide settling basins to avoid silting; install erosion control at out-falls of system.
 5. Winterize and stabilize site with Geotextile Fabric and gravel so that the site drains and avoids it becoming a quagmire. Maintain access roads on the site with Geotextile Fabric and gravel and make repairs to avoid furrow, ruts, or potholes.
 6. Remove equipment and installation when no longer needed.
- F. Sediment and Erosion Control: **Contractor** shall furnish, install and maintain means and methods to reduce excessive erosion, minimize sedimentation discharge, and prevent

construction materials discharge from causing off-site and on-site contamination. **Contractor** shall coordinate with Owner.

1. **Contractor** shall pay for and maintain required permits.
2. **Contractor** shall furnish:
 - a. National Pollutant Discharge Elimination (NPDE) permit.
 - b. **Contractor** shall file Notice of Intent to California State Water Resources Control Board (SWRCB) stating date construction will begin. Provide copy to Owner.
 - c. **Contractor** shall prepare, maintain and follow Storm Water prevention Plan. The Plan shall include **Contractor's** Best Management Practices (BMP) describing means and methods to control sediment, erosion and other pollutants.
 - d. **Contractor** shall keep BMP Program at jobsite.

PART II - PRODUCTS

- 2.01 Polyethylene: Polyethylene used for critical barriers and for sealing walls, floors or ceiling systems shall be a minimum of 6 mil thickness and fire-retardant type listed by Fire Underwriters Laboratories, Griffolyn #T55R with Griffolyn fire retardant tape, or equal.

PART III - EXECUTION

END OF SECTION 01 56 00

SECTION 01 61 00

PRODUCT REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Product Options
- B. Product Substitutions
- C. Product Transportation and Handling Requirements
- D. Product Storage and Protection
- E. Product System Completeness

1.02 RELATED SECTIONS

- A. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- B. Section 013900 - GREEN BUILDING POLICY IMPLEMENTATION
- C. Section 014100 – REGULATORY REQUIREMENTS
- D. Section 014500 – QUALITY CONTROL

1.03 PRODUCTS

- A. Product Selection: Provide products that comply with Contract Documents, are undamaged and unused at installation.
- B. Product Completeness: Provide products complete with all accessories, trim, finish, safety guards and other devices needed for complete installation and for intended use and effect.
- C. Products: Items purchased for incorporation in Work, whether purchased for project or taken from previously purchased stock; this includes materials, equipment, assemblies, fabrications and systems.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model designation indicated in the manufacturer's published product data.
 - 2. Materials: Products that are shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed or installed to form part of the Work.
 - 3. Equipment: A product with operating parts, whether motorized or manually operated, requiring connections such as wiring or piping.
- D. Specific Product requirements: Refer to requirements of Section 014500 – QUALITY CONTROL and other Sections in Division 2 through 49 for specific requirements for products.

- E. Code Compliance: All products, other than commodity products prescribed by Code, shall have current listing service report or research report. Minimum Requirements: Specified requirements are minimum requirements.
- F. Interchangeability: To fullest extent possible, provide products of the same kind from single source. Products supplied in quantity shall be same product and interchangeable throughout the Work. When options are specified for selection of any of two (2) or more products, product selected shall be compatible with products previously selected.
- G. Nameplates: Except for required labels and operating data, do not attach manufacturer's name plates or trademarks on surfaces exposed to view in occupied spaces or on the exterior of building.
- H. Equipment Nameplates: Provide permanent nameplate on each item or service-connected or power-operated equipment. Locate on inconspicuous accessible surface. Nameplate shall contain the following information and essential operating data:
 - 1. Name of product and manufacturer
 - 2. Model and serial number
 - 3. Capacity and Speed
 - 4. Ratings and other pertinent information
- I. Listing Service: Products, for which listing service standards have been established and for which their service label is available, shall bear the appropriate listing service label.

1.04 PRODUCT OPTIONS

- A. Products Specified Only by Description: Where the Contract Specifications describe a product, listing characteristics required, with or without use of a brand name, provide a product that provides the appropriate characteristics and otherwise complies with the requirements.
- B. Performance Specification: Where Contract Specifications require compliance with performance requirements, provide products that comply and are recommended for application. Manufacturer's recommendations may be contained in Product literature, or by certification of performance.
- C. Compliance with Standards: Where Contract Specifications require compliance with a standard, select a product that complies with the standard specified.
 - 1. Wherever catalog numbers and specific brands or trade names followed by the designation "to match existing" are used in conjunction with product(s) required by the Contract Specification, no substitution will be considered.

D. Products Specified by Naming One (1) or More Manufacturers:

1. Specified manufacturer(s): Provide specified product(s) of the specified manufacturer. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the design used in the Work and the use of alternative-named products or substitutes may require modifications in that design. If such alternatives are proposed by **Contractor** and are approved by Owner, **Contractor** shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to Owner for evaluation of revisions and modifications of the design resulting from the substitutions submitted by **Contractor**.
 - a. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and "or equal" supporting data for second manufacturer's product, if proposed by **Contractor**, shall be submitted in accordance with the requirements for substitution.
2. Quality Standard: Products(s) of the specified manufacturer shall serve as standard by which the product(s) of other named manufacturers are evaluated.

E. "Or Equal" Provision: Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by Contract Specification to establish standard of quality, utility, and appearance required.

1. "Or Equal" Products: Equivalent products of manufacturers other than the specified manufacturer may be provided if determined by Owner's Representative to be acceptable in accordance with substitution provisions following:
 - a. **Contractor** shall submit to Owner's Representative, within thirty-five (35) calendar days after the date of commencement of the Work specified in the Notice to Proceed, a list in excel format containing Specification Section number with extension i.e. 088000 2.B.1.a. with descriptions of each product proposed for substitution.
 - b. **Contractor** shall provide supporting data as required herein.
 - c. Owner will evaluate **Contractor's** proposal. The decision of Owner shall be final.
 - d. Owner will accept, in writing, proposed substitutions that are in Owner's opinion equal in quality, utility and appearance to the product specified. Such acceptance does not relieve **Contractor** from complying with requirement of the Contract Documents.

- e. **Contractor** shall be responsible for all costs of any changes resulting for **Contractor's** proposed substitutions that affect other work, or the Work of Separate **Contractor**.
 - f. Failure to place orders for specified products sufficiently in advance of required date for incorporation into the Work will not be considered justification for **Contractor** to request a substitution or deviation from requirements of the Contract Documents. The sixty (60) calendar day submittal period does not excuse **Contractor** from completing the Work within the Contract Time.
- 2. **Contractor's Determination:** Prior to submitting "or equal" product(s) for consideration, **Contractor** shall review and determine product(s) meet or exceed the quality and warranty provisions of the specified product.
 - 3. **Late Substitution Requests:** If a request for substitution occurs after the sixty (60) calendar day period, the substitution may be reviewed at the discretion of Owner and the costs of such review, as approved by Owner, shall be deducted from the Contract Sum.
 - a. **Product Availability Waiver:** Substitutions will be considered after the sixty (60) calendar day period only when a product becomes unavailable due to no fault of the **Contractor**.
- F. **Visual Matching:** Where Contract Specifications require matching a sample, Owner's decision on proposed product match is final. If no product matches and complies with other requirements, comply with provisions for "substitutions" for selection of a matching product in another category.
 - G. **Visual Selection:** Where requirements include the phrase "....as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product that complies with other requirements. Owner's Representative will select color, pattern and texture from the product line selected.

1.05 SUBSTITUTIONS

- A. **Substitutions:** Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the **Contractor** after award of the Contract shall be considered "substitutions". The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by Owner's Representative or Owner's Consultant.
 - 2. Specified options of products and construction methods included in Contract Documents.
 - 3. Compliance with governing regulations and orders issued by governing authorities.

- B. Substitution Provisions: Requests for Substitutions will only be considered if **Contractor** submits the following data:
1. Furnish complete technical data including drawings, performance specifications, samples, test reports and any additional information required by Owner's Representative, for each product proposed for substitution.
 - a. Submit ONE (1) PDF file with bookmarks.
 - b. In reviewing supporting data for substitution, Owner will use, for purpose of comparison, all characteristics of Basis of Design specified product as it appears in manufacturer's published data even though all characteristics may not have been particularly mentioned in the Contract Specifications. If more than two (2) substitutions of supporting data are required, Owner's costs of reviewing additional supporting data will be deducted from the Contract Sum.
 - c. Submit statement indicating substitution's effect on the Construction Schedule, if any.
 - d. Submit cost information, including proposal of net deduction, if any, from Contract Sum.
 2. Furnish statement by **Contractor** that proposed substitution is in full compliance with requirements of Contract Documents and Applicable Codes.
 3. Provide a Comparison Table as part of the substitution request listing the design and performance criteria of the Basis of Design specified product with the proposed substitution product side by side. The design and performance criteria shall include but not limited to; size, thickness, gauge, strength, function, ASTM rating, test report data, manufacturing association standards & data, technical properties & performance data, traffic or weather resistance, quality assurance data, warranty and other design and performance criteria list in Basis of Design manufactures specification and written material.
 4. Furnish list of Subcontractors, if any, that may be affected by the substitution.
 5. If proposed substitution requires portions of the Work to be redesigned or removed in order to accommodate substituted product, submit design and engineering calculations prepared by the licensed design professional of record.
 6. Contract Document Revisions: Should **Contractor**-proposed or alternate sequence or method of construction require revision of Contract Documents, including revisions for purpose of determining feasibility, scope or cost, or revisions for the purpose of obtaining approval by governing authorities having jurisdiction, revisions will be made by Owner's Consultant who is the design professional of record.
 - a. Services of Owner's Consultants, including time spent in researching and reporting on proposed substitutions or alternate sequences and methods of construction, shall be paid by **Contractor** when such activities are considered additional services to the design services contracts of Owner.
 - b. Cost of services by Owner's Consultants shall be paid on a time and material basis, based on current hourly fee schedules, with reproduction,

long distance telephone and shipping costs reimbursable. Such fees shall be paid whether or not the proposed substitution or alternate sequence or method of construction is ultimately accepted by Owner and Change Order executed. Such fees owed shall be deducted from the Contract sum on the next Application for Payment.

7. Submit all proposed substitutions in writing to Owner using the Request for Substitution form provided at the back of this Section.
- C. Owner may reject any substitution not proposed as described above and presented within the time prescribed.
- D. Revisions to submittals: If Owner's Representative, in reviewing list of substitutions, requires revisions or corrections to previously accepted Shop Drawings and supplemental supporting data, **Contractor** shall promptly do so. If any proposed substitution is judged by Owner's Representative to be unacceptable, the specified product shall be provided at no cost to the Owner.
- E. Samples: Samples may be required. Tests required by Owner's Representative for determination of quality and utility shall be made by **Contractor's** independent testing Laboratory, at expense of **Contractor**, with prior Owner acceptance of test procedure.

1.06 TRANSPORTATION, DELIVERY AND HANDLING

- A. Transport products by methods to avoid product damage.
- B. Schedule delivery to minimize long-term storage and prevent overcrowding construction spaces. Coordinate with installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
- C. Deliver products in undamaged condition in manufacturer's original sealed container or packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- D. Provide equipment and personnel to handle products by methods to prevent soiling, marring or other damage.
- E. Promptly inspect products on delivery to ensure products comply with Contract Documents, quantities are correct, and to ensure products are undamaged and properly protected. Promptly remove damaged or defective products from site and replace at no adjustment to the Contract Sum and/or Contract Time.

1.07 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store products to facilitate inspection and measurement of quantity or counting of units.
- C. Store heavy materials away from structures in a manner that will not endanger supporting construction.
- D. Store sensitive products in weather-tight enclosures. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation.

1. Maintain temperature and humidity within range required by manufacturer's instructions.
 2. Exterior Storage:
 - a. Store products above ground on blocking or skids to prevent soiling, staining and damage.
 - b. Cover products that are subject to damage by the elements with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.
 - c. Store sand, rock, aggregate or other loose granular material in well-drained area on solid surfaces. Prevent mixing with foreign matter.
 3. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and maintained under required conditions, free from damage and deterioration.
- E. Protection After Installation: Provide barriers, substantial coverings, notices and other materials or methods as necessary to protect installed work from traffic, subsequent construction operations and weather.
1. Maintain temperature and humidity conditions in interior spaces for Work in accordance with manufacturers' instructions for materials and equipment being protected.
 2. Remove protective measures when no longer required and prior to Acceptance of the Work.

1.08 SYSTEM COMPLETENESS

- A. The Contract Drawings and Contract Specification are not intended to be comprehensive directions on how to produce the Work. Rather, the Drawings and Specifications are instruments of service prepared to describe the design intent for the completed Work.
- B. It is intended that equipment, systems and assemblies be complete and fully functional even though not fully described. Provide all products and operations necessary to achieve the design intent described in the Contract Documents.
- C. **Contractor** is urged to report to Owner's Representative immediately when elements essential to proper execution of the Work are discovered to be missing or misdescribed in the Contract Documents or if the design intent is unclear.

- D. Should an essential element be discovered as missing or misdescribed prior to receipt of bids or establishing a negotiated Contract Sum, an Addendum or Clarification will be issued so that all cost may be accounted in the Contract Sum.
- E. Should an obvious omission or misdescription of a necessary element be discovered and reported after execution of the Agreement, **Contractor** shall provide the element as though fully and correctly described.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSTALLATION OF PRODUCTS

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

3.02 Refer to the following Attachment:

- A. Request for Substitution Form.

END OF SECTION 01 61 00

REQUEST FOR SUBSTITUTION

Substitution #: _____ Submittal #: _____ Date: _____

Project#: _____ Specification #: _____

PROJECT NAME: _____

COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street TO: Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 Attn.: Project Manager Joseph.Cooper@lakecountyca.gov	FROM: _____ _____ _____ _____ _____ _____
--	---

Name of Party Submitting Request for Substitution: _____

Reason for Submitting Request for Submission: _____

Specification Section and Paragraph #: _____

Substitution Manufacturer name and address: _____

Proposed substitution (trade name of product, model or catalog #): _____

Fabricators and Suppliers (as appropriate): _____

PRODUCT DATA:

ATTACH PRODUCT DATA AS SPECIFIED IN SPECIFICATION SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Similar projects using product (list dates of installation and names/phone numbers of Owners):

Similar comparison of proposed substitution with specified product (indicate variation(s), and reference each variation to appropriate Specification Section paragraphs):

-ATTACH COMPARISON SUMMARY-

(SUBSTITUTION REQUEST CONTINUES)

Quality and performance comparison between proposed substitution and specified product:

Availability of maintenance services and replacement materials: _____

Effect of proposed substitution on Construction Schedule: _____

Effect of proposed substitution on other work or products: _____

SECTION 01 72 00

PREPARATION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Surveying and Field Engineering Services

1.02 RELATED SECTIONS

- A. Section 014500 – QUALITY CONTROL
- B. Section 017800- CLOSEOUT SUBMITTALS

1.03 REGISTRATION REQUIREMENT

- A. **Contractor** shall employ civil engineers/land surveyors, which are registered and licensed in the state of California and acceptable to the Owner.

1.04 LINE AND GRADES

- A. **Contractor** shall provide all construction survey work required for accurate location of the Work. Horizontal and vertical control for the Work shall be from project reference marks as shown on Contract Drawings. Owner's decision will be final in all questions regarding proper location of work.
- B. **Contractor** shall verify final configuration of project during demolition work. Minor adjustments of work to accommodate existing field conditions shall be responsibility of **Contractor**.
- C. For work that connects to existing structures with new floors or roofs that align with existing conditions; **Contractor** shall verify new and existing elevations prior to constructing the

new floor or roof structure. Adjust elevations accordingly so that the new and existing floors are level and lineup.

1. Owner approval in writing is required for any deviations from the contract documents intent.
- D. Replace control points that may be lost or destroyed, base requirements on original survey control, at no increase in the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify locations of survey control points prior to starting work. Promptly notify Owner's Representative of any discrepancies discovered.

3.02 SURVEY REFERENCE POINTS

- A. Protect survey control points prior to starting site work; preserve permanent reference points during construction. Make no changes without prior written notice to Owner's Representative.
- B. Promptly report loss or destruction of any reference point or relocation required to Owner's Representative. Replace dislocated survey points based on original survey control.
- C. All control points established for the project must be clearly shown on the record documents.

3.03 SURVEY REQUIREMENTS

- A. Establish minimum of three (3) permanent benchmarks on site, referenced to establish control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out by instrumentation and similar appropriate means:
1. Site improvements, including pavements, stakes for grading, fill and topsoil placement, utility locations, slopes and invert elevations.
 2. Grid or axis for structures.
 3. Building foundation, column locations and ground floor elevations.
 4. Controlling lines and levels required for mechanical and electrical work.
 5. Verify layouts as Work proceeds to assure compliance with required lines, levels and tolerances.
- C. Periodically certify layouts by same means.

3.04 RECORDS

- A. Maintain complete and accurate log of all control and survey work as it progresses Including but not limited to items indicated in 3.03, B. and 3.04, B.
- B. On completion of foundation walls, underground utilities and major site improvements, prepare certified survey showing all dimensions, locations, angles and elevations of construction. Provide as part of the As-Built Documents per Section 017800.

END OF SECTION 01 72 00

SECTION 01 73 00
CUTTING AND PATCHING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching Work.
- B. Hazardous Conditions Permit requirements for brazing, welding and other hot work.

1.02 RELATED SECTIONS

- A. Section 011100 – SUMMARY OF THE WORK
- B. Section 013100 – COORDINATION
- C. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- D. Section 015610 – AIRBORNE CONTAMINANTS CONTROL
- E. Section 016100 – PRODUCT REQUIREMENTS
- F. Individual Specifications Sections.
 - 1. Cutting and patching incidental to Work specified in this Section.
 - 2. Coordination with work in other Sections for openings required to accommodate Work specified in those other Sections.

1.03 SUBMITTALS

- A. **Contractor** shall complete and submit for review to Owner's Representative, a Coring/Sawcutting Form, included at the end of this Section, and obtain written authorization for Owner prior to the commencement of any dig activities. **Contractor** shall

include all pertinent information with the Coring/Sawcutting Form and submit with detailed work plan fourteen (14) calendar days prior to desired coring/cutting activity.

1. Structural integrity of any element of Project.
2. Integrity of weather-exposed or moisture-resistant element.
3. Efficiency, maintenance, or safety of any operational element.
4. Visual qualities of sight-exposed elements.
5. Work of Owner.
6. Utility supply, drains, fire alarm, communication.

B. Include in request:

1. Identification of Project, including Owner's Project Name and Project Number.
2. Location and description of affected Work.
3. Necessity for cutting and patching.
4. Description of proposed work, and products to be used.
5. Alternatives to cutting and patching.
6. Effect on work of Owner.
7. Written permission of Owner.
8. Date and time work will be executed.

1.04 NOTIFICATIONS

- A. Before starting welding or cutting work involving the use of gas or electric welding equipment, or any brazing work involving gas or electric brazing equipment **Contractor** shall complete a Hazardous Conditions Permit form. **Contractor** shall allow seventy-two (72) Hours for Fire Marshal's approval and issuance of Hazardous Conditions Permit. This permit will be issued without cost to **Contractor** and may be applicable to more than one (1) building. **Contractor** shall be responsible for reporting to Lakeport Fire Department either by telephone or in person at beginning and end of each day's work. Provide minimum written notice of fourteen (14) calendar days prior to such activities.

1. Welding and brazing personnel must be certified by an Owner approved laboratory and must maintain this certification during the work of this Contract.
2. **Contractor** is responsible for notifying Owner of all apparent locations where suspect asbestos containing materials may be present or discovered during the course of the project such as cement pipes or other insulated material, which may be a result of newly excavated materials below grade or after building systems are opened such as within wall, ceiling or subfloor spaces. When any such location is

discovered by **Contractor**, information relating thereto shall be immediately communicated to Owner's Representative.

3. Where welding and cutting activity is required and suspect painted surfaces are present that will be impacted by the welding or cutting activity, the contractor shall request from the Owner's Representative information regarding laboratory analysis for lead or other hazardous metals in the painted metal components before any cutting or welding is performed. The contractor shall refer to Section 013500 Special Procedures, 1.05 Hazardous Materials Procedures regarding materials impacted by welding and cutting activity.
4. **Contractor** shall then follow any and all instructions as indicated by Owner's Representative.

PART II - PRODUCTS

2.01 MATERIALS

- A. Product substitution: For any proposed change in materials, submit request for substitution under provision of SECTION 016100 – PRODUCT REQUIREMENTS. Use only materials for cutting, fitting, and patching which comply with the applicable

Specification Sections, and which match adjacent materials. Use materials whose installed performance will equal or surpass that of existing materials.

PART III - EXECUTION

3.01 EXAMINATION

- A. General: Execute cutting, fitting and patching including excavation and fill, to complete Work and:
 - 1. Fit the several parts together, to integrate with other work.
 - 2. Uncover work to install ill-timed work.
 - 3. Remove and replace defective and non-conforming work.
 - 4. Remove samples of installed work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical work.
- B. Examination, General: Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
 - 1. After uncovering existing Work, inspect conditions affecting proper accomplishment of Work.
 - 2. Beginning of cutting or patching shall be interpreted to mean that existing conditions were found acceptable by **Contractor**.
- C. Ground Penetrating Radar: Determine by Ground Penetrating Radar all existing reinforcing, conduit and piping located in concrete walls and slabs prior to demolition. Clearly mark all locations and review with Owner Representative prior to demolition.

3.02 PREPARATION

- A. Temporary Supports: Provide supports to assure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Weather Protection: Provide protection from elements in all areas that may be exposed by uncovering work. Maintain excavations free of water.
- C. Protection. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas. Do not block required exit ways or stairs.
- E. Protect rated floor, wall and ceiling assemblies. Prior to cutting opening in a rated assemblies review with Owner's Representative and get written approval from the Lakeport Fire District Fire Marshal.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching to properly complete Work.
- B. Coordinate installation or application of products for integrated Work.
- C. Uncover completed Work as necessary to install or apply products out of sequence.
- D. Remove and replace defective or non-conforming Work.
- E. Provide openings in the Work for penetrations of mechanical and electrical Work.
- F. Provide cutting and patching to accommodate all demolition work as part of this contract. Provide level and plumb cuts at locations that will be exposed or to provide smooth and even surface for patching to existing work or surfaces.
- G. Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

3.04 PERFORMANCE

- A. Execute cutting and patching by methods to avoid damage to adjoining Work, and that will provide appropriate surfaces to receive final finishing.
- B. Execute cutting and patching of weather-exposed, moisture-resistant and sight-exposed surfaces by methods to preserve weather, moisture and visual integrity.
- C. Restore work with new Products as specified in individual Sections of Contract Documents.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval from Owner. Coordinate timing of all sawing and cutting work with the Owner's Representative. Do not over saw cut corners and intersection unless written authorization is provided from the Owner Representative and the Structural Engineer of Record.
- E. Fit work neat and tight allowing for expansion and contraction. Butt new finishes to existing exposed structure, pipes, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of firewalls, partitions, ceiling, or floor construction, completely seal voids with UL approved fire-rated assembly. Provide temporary closures at the end of each workday. Closures shall be approved by the Lakeport Fire District Fire Marshal.
- G. Refinish surface to match adjacent finish. For continuous surfaces, refinish to nearest intersection, corner or natural break and from floor to ceiling. For an assembly, refinish unit. All patched surfaces from new to existing shall provide a smooth and even transitions aligning with the adjacent surface with no visible marks, joints, seams, sheen, texture or color difference.
- H. Where new construction is to join with or match existing work, it shall be finished exactly to that work so as to form a complete unified and finished element.
- I. Visual Requirements: Do not cut and patch operating elements or related components in a manner that would, in the Owner's Representative's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in

visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner, including by not limited to.

1. Repair and patch in areas where finishes have been visually disturbed by cutting and patching to the nearest intersections.
2. Processed concrete finishes
3. Firestopping
4. Acoustical ceilings
5. Flooring
6. Carpeting

3.05 Refer to the Following Attachment

A. Coring/Sawcutting Notification

END OF SECTION 01 73 00

CORING/SAWCUTTING NOTIFICATION

LOCATION: _____ PROJECT#: _____
 TITLE: _____

TRACKING NUMBER: _____
 (Provided by PO&M)

Spec #: _____ DATE: _____

TO: COUNTY OF LAKE PUBLIC SERVICES 333 2 nd Street Lakeport, CA 95453 P: 707-262-1618 C: 707-245-6911 <u>Project Manager:</u> <u>Joseph.Cooper@lakecountyca.gov</u>	FROM: _____
---	-------------

SCOPE: _____

HAS USA BEEN NOTIFIED? ☐ YES ☐ NO *When?* _____
 ARE ALL KNOWN UTILITIES MARKED? ☐ YES ☐ NO *By Whom?* _____
 LOCATION OF WORK SHOWN ON ATTACHED SITE PLANS? ☐ YES ☐ NO *Purpose:* _____
 DATE(S) CORING OR SAWCUTTING WILL TAKE PLACE: _____ Signed: _____

LAKE COUNTY USE ONLY

DATE RECEIVED: _____

WHO FROM OWNER WILL AUTHORIZE, SUPERVISE AND VERIFY?
 PHONE: _____

Utilities Verified by IOR? ☐ YES ☐ NO

Activities coordinated with: ☐ PO&M ☐ Fire ☐ Telecom ☐ Occ. Safety
☐ Other (Itemize): _____

COMMENTS: _____

Signed: _____
 DATE AUTHORIZED: _____ Owner Representative
 PO&M: _____

COMPLETION DATE: _____

COMMENTS:
 (Unknown Utilities Encountered,
 Disruptions, Successes, Weather,
 etc.)

SIGNED: _____

Copies to: Owner Consultants, Facilities Maintenance, Fire, Telecom, File, Others: _____

SECTION 01 74 00

CLEANING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Construction Cleaning.
- B. Requirements for cleaning during progress of Work, at Substantial Completion of Work and at Acceptance of Work.
- C. Disposal of waste materials, debris and rubbish during construction.

1.02 RELATED SECTIONS

- A. General Conditions of the Contract: Cleanup.
- B. Additional Requirements: Cleaning for specific products or elements of Work are described in Specification Sections describing that Work.

PART II - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning agents and materials that will not create hazards to health or property and that will not damage surfaces.
- B. Use only those cleaning agents, materials and methods recommended by manufacturer of the material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning agent manufacturer.

2.02 EQUIPMENT

- A. Provide covered containers for deposit of waste materials, debris, and rubbish.
- B. Provide at each entry point to the Work, and at other areas as directed by Owner's Representative, a clean room sticky mat. Replace mats daily or as requested by Owner Representative.

PART III - EXECUTION

3.01 CLEANING

- A. Construction Cleaning: During Construction, maintain buildings, premises and property free from waste materials and rubbish. Dispose of such waste and debris at reasonable intervals off of Owner property.
 - 1. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.
 - 2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to closing such spaces.
 - a. All horizontal surfaces above ceilings shall be cleaned prior to ceiling closure.
 - 3. After every concrete placement clean all wet concrete from all surfaces.
 - a. Interior and exterior
 - 4. Clean interior areas daily to provide suitable conditions for Work. Remove debris from areas of work on a daily basis at a minimum, or more often as required to provide suitable conditions for work.
 - 5. Broom clean with sweeping compound or HEPA Vacuum interior areas prior to start of surface finishing, and continue cleaning on an as needed basis.
 - 6. Control cleaning operations so that dust and other particles will not adhere to wet or newly coated surfaces.
 - 7. Provide a mat, as specified above, for project entrances and exits. Item to be of sufficient size to allow personnel exiting project site to clean debris and dust from shoes. Tracking dust and debris through working areas of the facility and/or related buildings is not acceptable.
 - 8. Any dust or debris tracked out of the construction site, either by foot traffic or by debris hauling vehicles shall be cleaned by the contractor. If the dirt or other debris is determined by the Owner's Representative to from the contractor's activities at the jobsite it shall be cleaned in a timely manner regardless of how far from the site it is.
- B. Conduct cleaning and disposal operations in compliance with Waste Management Program per 013900 and all applicable codes, ordinances, regulations, including anti-pollution laws.

3.02 SUBSTANTIAL COMPLETION CLEANING

- A. Execute a thorough cleaning prior to Substantial Completion review by Owner's Representative.

- B. At roof areas remove all unused materials and construction waste including but not limited to screws, nails, fasteners, sheet metal cuttings, scrapes, oil, grease and adhesive. Wash down roof horizontal and vertical surfaces. Clean out all debris at roof drains.
- C. Clean walkways, driveways and streets by thorough brooming and wash-down.
- D. Clear debris from storm drainage lines and ways, leaving site ready for stormy weather.
- E. Rake landscaped areas clean.
- F. Remove waste and surplus materials, rubbish and temporary construction facilities, utilities and controls.
- G. Disinfect containment and protection areas as directed by Owner Representative.
- H. For Airborne Contamination areas: Construction cleaning use wet cleaning methods and HEPA-filtered vacuum cleaners are required to minimize release of airborne contaminants. Contain waste materials, debris and rubbish.

3.03 FINAL COMPLETION CLEANING

- A. Complete final cleaning before submitting final Application for Payment.
- B. Employ professional building cleaners to thoroughly clean building immediately prior to final inspection.
- C. Remove the following but not limited to concrete splatters, paint splatters, pencil marks, pen marks, chalkline marks, tape, protective films & coatings, grease, mastic, adhesives,

dust, dirt, stains, fingerprints, labels, and other foreign materials from all sight-exposed interior and exterior surfaces.

- D. Restore damaged or marred surfaces.
- E. Remove dust from all horizontal surfaces not exposed to view, including light fixtures, ledges and fixture lenses.
- F. Clean and polish all glass, mirrors, and bright metal work. Clean and disinfect all plumbing fixtures.
- G. Damp wash all resilient flooring. Waxing of resilient flooring shall be done by the Owner.
- H. Thoroughly sweep all floors and vacuum all carpets.
- I. Cleaning of Work provided by Owner under separate contracts, will not be required except if soiled by construction activities under this Contract.
- J. Thoroughly clean and polish all resilient flooring, metal and plastic surfaces; remove labels and protective coatings.
- K. Replace filters and clean heating and ventilating equipment used for temporary heat and ventilation.
- L. Remove waste material or equipment that has been damaged, touch up and /or repair exposed areas; such repairs to be approved by Owner's Representative.
- M. Should final cleaning be inadequate, as determined by Owner's Representative, and Contractor fails to correct conditions, Owner's Representative may order thorough cleaning and deduct the cost from Final Payment.

3.04 FINAL COMPLETION SITE CLEANING

- A. Broom clean exterior paved surfaces. Rake clean other surfaces of the grounds.
- B. Power Wash, Hose down and scrub where necessary all concrete and walks dirtied as a result of the construction work. Thoroughly remove mortar droppings from all walks and pavements.
- C. Remove from the site all tools, equipment, construction waste, unused materials, excess earth, and all debris resulting from the Work.

3.05 DISPOSAL

- A. Conduct cleaning and disposal operations in compliance with all applicable codes, ordinances, regulations, including anti-pollution laws.
- B. Do not bury or burn rubbish or waste material on Owner premises.
- C. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
- D. Remove waste materials, debris, and rubbish from site and dispose of off-site.

3.06 INSPECTION

- A. Prior to Beneficial Occupancy, Substantial Completion or Final Completion; Contractor and Owner's Representative shall jointly conduct an inspection of sight-exposed interior and exterior surfaces to verify that entire Work is clean.

END OF SECTION 01 74 00

SECTION 01 75 00
STARTING AND ADJUSTING SYSTEMS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Starting Systems

1.02 REALATED SECTIONS

- A. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES
- B. Section 018200 – DEMONSTRATION AND TRAINING
- C. Section 019100 - COMMISSIONING
- D. Division 22
- E. Division 23
- F. Division 25
- G. Division 26
- H. Division 27

1.03 SUBMITTAL REQUIREMENTS

- A. Submit preliminary schedule listing times and dates for start-up of each item of equipment in sequence in writing, minimum of ninety (90) calendar days prior to any start-up.
 - 1. Start up, testing and Commissioning of equipment shall be integrated and coordinated with the contract schedule.
 - a. Adjustments will be made as project progresses, but the sequencing will be maintained.
- B. Submit manufacturer's representative reports within one (1) week after start-up, listing satisfactory start-up dates.
- C. Provide information, manufacturer and model number of all testing equipment to be used and current certification that the testing equipment has been calibrated within the last 6 months.
- D. Maintain log with dates and results of Starting and Adjustments, and provide electronic copy to Owner's Representative.

1.04 PROJECT CONDITIONS

- A. Building enclosure shall be complete and weather-tight.
- B. Excess packing and shipping bolts shall be removed.
- C. Interdependent systems shall have been checked and made operational.
- D. Permanent Power is connected and operational to the building.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 INSPECTION

- A. Verify Project conditions comply with requirements for start-up.
- B. Verify status of Work meets requirements for starting equipment and systems.

3.02 PREPARATION

- A. Coordination: Coordinate sequence for start-up of various item of equipment.
- B. Notification: Notify Owner in writing, minimum of fourteen (14) calendar days prior to start-up of each item of equipment.
- C. **Contractor** Quality Assurance Manager shall take the lead role for Starting and Adjusting the equipment; coordinate and work with the Owner's Representative and Inspectors throughout the entire process.
 - 1. Coordinate all start-up with the Commissioning Agent for the project.
- D. Information on hand: Have Contract Documents, shop drawings, product data, and operation and maintenance data at hand during entire start-up process.
- E. Verify each piece of equipment is anchored correctly per the manufacturer's requirements and the Contract Documents prior to energizing or starting.
- F. Verify each piece of equipment is connected to the correct power source, the breaker and conductors are the correct size. Overcurrent protection in place and required shut offs adjacent to the equipment are in place.
- G. Verify each piece of equipment has been checked for proper lubrication, drive rotation, belt tension, control sequence, and other conditions that may cause damage prior to energizing or starting.
- H. Verify control systems are fully operational in automatic mode.
- I. Manufacturer's Criteria: Verify tests, meter readings and specific electrical characteristics agree with electrical equipment manufacturers' criteria.

- J. Bearings: Inspect for cleanliness: clean and remove foreign matter, verify alignment. Take corrective action as required.
- K. Drives: Inspect for tension on belt drives, adjustment of vari-pitch sheaves and drives, alignment, proper equipment speed, and cleanliness. Take corrective action as required. Verify shaft grounding protection is in place.
- L. Motors: Verify motor amperage agrees with nameplate value. Inspect for conditions that produce excessive current flow and that exist due to equipment malfunction. Take corrective action as required. Verify shaft grounding protection is in place.

3.03 STARTING SYSTEMS

- A. Execute start-up under supervision of responsible **Contractor** personnel.
- B. Place equipment in operation in proper sequence in accordance with sequencing schedule and the contract schedule.
- C. Follow manufacturer's requirements and recommendations for Starting and Adjusting, including any Owner requirements that may be listed in the Contract and Construction Documents.
- D. Equipment manufacturers representatives shall be on site for Starting and Adjusting that equipment.
- E. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- F. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- G. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

END OF SECTION 01 75 00

SECTION 01 76 00

PROTECTION of EXISTING and INSTALLED CONSTRUCTION

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Protection for Products Including Owner Provided Products, After Installation.
- B. Protection of Existing Utilities, Interference and Underground Structures.
- C. Protection of Existing Structures and Work adjacent to new construction and demolition.

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 015100 – TEMPORARY UTILITIES

1.03 EXISTING UTILITIES

- A. Known Utilities: Known existing utilities are shown on Contract Drawings in approximate locations. **Contractor** shall exercise care in avoiding damage to existing facilities. **Contractor** shall be responsible for repair of same if damaged through **Contractor's** action. Hand excavation shall be utilized when digging in close proximity to existing utilities. Owner does not guarantee that all utilities or obstructions are shown, or that locations indicated are accurate.
- B. As part of the Contract Work the investigation and excavation to locate existing utilities and underground structures shall be as follows, Contractor shall assume the existing known utility is within a 5 feet zone on either side of the location indicated on the Contract Documents. If the existing known utility is not located within a 5 feet zone on either side of the location indicated on the Contract Documents, the Contractor shall immediately notify the Universities Representative. The Contractor shall continue excavating until the existing utility is located. The Contractor shall be compensated for any additional excavation beyond the 5 feet zone on either side of the existing utility per 1.03D.
- C. Electrical Equipment: No work shall be performed on energized electrical equipment unless scheduled with Owner's Representative. Owner reserves right to specify specific conditions for all work involving energized high voltage electrical equipment and its scheduled modification proposal.

- D. Uncovering Facilities: Prior to any earthwork for new construction, **Contractor** shall uncover all existing piping where crossings, interferences or connections are shown on Contract Drawings, from one (1) foot below proposed construction limit to the existing ground surface. Any variation in actual elevations and indicated elevations shall be brought to Owner's Representative attention. If **Contractor** does not expose all existing utilities, **Contractor** shall not be entitled to additional compensation for work necessary to avoid unknown interferences.
- E. Interferences: If interferences occur at locations other than general locations shown on Contract Drawings, and such utilities are damaged before such locations have been established, or create an interference, **Contractor** shall immediately notify Owner's Representative and a method for correcting said interference shall be supplied by Owner. Payment for additional work due to interferences not shown on Contract Drawings shall be in accordance with the General Conditions of the Contract. Cost of repair to damaged utilities shall be deducted from the Contract Sum.
- F. Accuracy of Drawings: Drawings showing location of equipment, piping, etc. are diagrammatic and job conditions will not always permit installations in locations shown. When a conflict situation occurs, immediately bring to attention of Owner's Representative for determination of relocation.
- G. Deviations from Drawings: Information shown relative to existing power and signal service is based upon available records and data but shall be regarded as approximate only. Minor deviations found necessary to conform with actual locations and conditions shall be made at no change to the Contract Sum.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PROTECTION AFTER INSTALLATION

- A. Installed Equipment and Materials: Adequately protect all installed equipment and materials until completion and acceptance by Owner's Representative.
- B. Existing Facilities: All existing areas, improvements and facilities shall be protected from damage of any type resulting from operations, equipment or workers of **Contractor** during the construction process.
- C. Subsequent Operations: Protect installed products and control traffic in immediate area to prevent damage from subsequent operations.
- D. Traffic Areas: Provide protective coverings at walls, projections, corners, and jambs, sills, and soffits of openings in and adjacent to traffic areas.
- E. Elevators: Cover walls and floors of elevator cabs, and jambs of cab doors, when elevators are used by construction personnel. Protect the elevator call buttons, switches, communication devices, lights, thresholds and other components.
- F. Moisture and Humidity Protection: Protect all new installed work and existing work per the manufacturer's requirements from moisture or humidity damage including but not limited

to stored materials, finishes, gypsum board, insulation, doors, casework, millwork, equipment and all other building components.

- G. Finished Floors: Protect finished floors and stairs from dirt, wear, and damage:
 - 1. Secure heavy sheet goods or similar protective materials in place, in areas subject to foot traffic.
 - 2. At all transitions to adjacent areas not under construction.
 - 3. Lay rigid materials in place in areas subject to movement of heavy objects and where storage of products will occur.
- H. Waterproofed and Roofed Surfaces:
 - 1. Restrict use of surfaces for traffic of any kind, and for storage of products.
 - 2. When an activity is mandatory, obtain recommendations for protection of surfaces from manufacturer. Install protection and remove on completion of activity. Restrict use of adjacent unprotected areas.
 - 3. No Construction work shall be conducted on any unprotected roof weather new or existing.
 - 4. All pathways to work on the roof shall be protected.
- I. Lawns and Landscaping: Restrict traffic of any kind across planted lawn and landscaped areas.
- J. Adjacent Facilities: Care shall be exercised to prevent damage to adjacent facilities including walks, curbs, and gutters. Adequate protection shall be placed where equipment will pass over such obstructions, and facilities damaged by construction operations shall be removed and replaced at **Contractor's** expense.

3.02 Protection of Existing Structure and Work adjacent to new construction and demolition.

- A. The **Contractor** shall protect existing in place work at the exterior and interior, including but not limited to finishes, materials, products, utilities, fixtures, and equipment adjacent to new construction and demolition. Any existing in place work at the exterior and interior that is damaged by the **Contractor** shall be repaired or replaced at no extra cost to the Owner.
- B. Overloading: Contractor shall be responsible for overloading any part or parts of structures beyond the calculated capacities of the design. Placing materials, equipment, tools,

machinery, or any other item shall be done with care to avoid overloading. No loads shall be placed on floors or roofs before they have attained their permanent and safe strength.

- C. **Damaged Work:** All damaged work shall be replaced, repaired, and restored to its original condition without change to the Contract Sum. Repair or replace all damaged work promptly as directed by Owner's Representative.
- D. **Damaged Utilities:** Where existing utilities are damaged or disrupted on account of any act, omission, neglect, or misconduct of the **Contractor** in the manner or method of executing the Work, or due to non-execution of work, such damage shall be immediately repaired to maintain operation regardless of the time of occurrence.
- E. **Temporary Construction:** Provide temporary construction necessary for protection of building and its parts. Close in buildings as soon as possible to protect from weather and vandalism. Protect existing buildings and controlled temperature areas from damage.
- F. **Doors and Casework:** Protect doors, millwork and mill counters and cases and hardware from damage, including abrading and scratching of finishes. Protect doors and frames and hardware from mechanical damage and damage to anodic coatings.
- G. **Protective Coatings:** Remove protective coatings, etc., as required to leave work in condition for painting and finishing, final cleaning, etc.
- H. **Exterior Work:** Protect all exterior work, including existing asphalt paving and landscaping and buildings.

END OF SECTION 01 76 00

01 77 00 CLOSE OUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Substantial Completion procedures.
 - 2. Final Acceptance Procedures.
 - 3. Final cleaning.
 - 4. Repair of Work

1.3 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Substantial completion: Prior to Substantial Completion, complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion.
 - 1. Notify Owner's Representative that project is ready for inspection. Participate with Owner in conducting inspection.
 - 2. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 3. Submit closeout submittals, including project record documents, operation and maintenance manuals, damage or settlement surveys, as-builts, and similar final record information.
 - 4. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

1.4 FINAL COMPLETION PROCEDURES

- A. Final Completion: Before requesting final inspection for determining final completion,

complete the following:

1. Notwithstanding the "Payment to Contractor" provisions set forth in the General Conditions, submit a final Application for Payment according to Section 012900 "Payment Procedures." No later than seven (7) days after work is complete, conduct a post-dredge survey. Submit to Owner for review and approval.
 2. Certified List of Incomplete Items: Submit certified copy of Owner's Representative Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owner's Representative. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit final inspection report.
 4. Submit final completion photographic documentation.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Owner's Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection Procedure: The Engineer will reinspect the Work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Engineer.
 2. Upon completion of reinspection, the Engineer will prepare a certificate of final acceptance, or advise the contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 3. If necessary, reinspection will be repeated.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list items applying to each space by major element.
 2. Submit list of incomplete items.

PART 2 - PRODUCTS (not applicable)

PART 3 – EXECUTION

3.1 FINAL CLEANING:

- A. Conduct cleaning and waste-removal operations.
 - 1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
 - b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- B. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

3.2 REPAIR OF WORK

- A. Complete repair and restoration operations, before requesting inspection for determination of Substantial Completion.

END OF SECTION

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Equipment Data
- B. Operation and Maintenance Instructions
- C. Instruction of Owner personnel
- D. Schedule of Submittals
- E. Spare Parts and Maintenance Materials
- F. Guarantees, Warranties, Bonds, Service and Maintenance Contracts
- G. Project As-built Documents

1.02 RELATED SECTIONS

- A. Section 013100 – COORDINATION
- B. Section 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- C. Administrative general requirements for submittals.
- D. Section 014500 – QUALITY CONTROL: Manufacturer's tests and inspections as a condition of warranty.
- E. Section 014550 – INSPECTION AND TESTING OF WORK
- F. Section 016100 – PRODUCT REQUIREMENTS
- G. Section 017700 – CLOSEOUT PROCEDURES

1.03 FILE FORMATS

- A. All printed documents submitted per this section shall be in PDF format
 - 1. The PDF files will be unlocked and searchable.
 - 2. All PDF documents will be bookmarked.
 - 3. The exception to electronic format for As-Built drawings will be noted in the specific specification section where they are required.
- B. Digital Photography
 - 1. All files will be submitted in JPEG

1.04 EQUIPMENT DATA AND OPERATION AND MAINTENANCE (O&M) INSTRUCTIONS

- A. Preparation of data shall be done by persons:
 1. Trained and experienced in maintenance and operation of described products.
 2. Familiar with requirements of this Section.
 3. Skilled in technical writing to extent required for communication of essential data.
 4. Skilled as drafters competent to prepare required drawings
- B. O&M Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at time of Section Submittals. Submit reviewed manual content formatted and organized as required by this Section. Prepare in the form of a data and instructional manual.
- C. Submit PDF electronic files of operation and maintenance manuals. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to the Owner. The exception to electronic format will be indicated in the specific specification section requiring hard copies of the manual.
 1. Name each indexed document file in composite electronic index with applicable item name. Include a completed electronically linked operation and maintenance directory.
 - a. List Project title and Project number and particular building as applicable.
 - b. Enable inserted reviewer comments on draft submittals.
 2. Organization: Arrange content by systems under Section numbers and sequence in accordance with the Project Specifications Table of Contents.
- D. Table of Contents, Each Volume: Provide title of Project, Project number, with names, addresses, and telephone numbers of Owner's Representative, as applicable, and **Contractor**, including name of contact person. Provide schedule of products and systems, indexed to content of the volume.
 1. For each Product or System: List names addresses and telephone numbers of subcontractor, original supplier and manufacturer, as applicable, including name of contact person. Include name and address of local source of supplies and replacement parts.
 2. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete information not applicable.
 3. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project As-Builts Documents as maintenance drawings.
 4. Additional Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in SECTION 014500 – QUALITY CONTROL.
 5. Warranties and Bonds: Include in each applicable section.

E. Manual for Materials and Finishes:

1. Building Products, applied Materials, and Finishes: Provide PDF composite electronically indexed file. Include product data, with catalog number, size, composition, and color and texture designations. Provide information for re-ordering custom manufactured Products.
2. Instruction for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
3. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
4. Additional Requirements: As specified in individual Specification Sections.
5. Table of Contents: Provide PDF electronic file with links to individual sections.

F. Manual for Equipment and Systems

1. Record Instructions: Forward to Owner's Representative, upon completion of work, and before work will be considered for acceptance, complete PDF composite electronically indexed file of instructions of entire plant and component parts, including manufacturer's certificates, warranty slips, parts lists, descriptive brochures, and maintenance and operating instructions, in quantities set forth in various Divisions. Submit drafts for review before preparing final PDF electronic file.
2. O & M Instructions: Provide and install, where directed, printed sheet under clear plastic cover, giving concise operating and maintenance instruction for equipment.
3. Each Item of Equipment and Each System: Inclusive description of unit or system, Model Number, Serial Number, and component parts. Identify function, normal characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts. Best to include all information provided in final approved equipment submittal. Design drawing shall be updated to reflect what was actually provided.
4. Panelboard Circuit Directories: Provide electrical service characteristics, controls and communications.
5. Wiring Diagrams: Include color-coded wiring diagrams as installed.
6. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and any special operating instructions.
7. Maintenance Requirements: Include routine procedures and guide for troubleshooting; disassembly, repair, and re-assembly instructions; and alignment, adjusting, balancing, and checking instructions. Provide servicing and lubrication schedules, and list of lubricants required.
8. Instructions: Include manufacturer's printed operation and maintenance instructions. Include sequence of operation by controls manufacturer.
9. Parts Data: Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance. Provide list of original

manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

10. Control Data: Provide as installed control diagrams by controls manufacturer.
11. Piping Data: Provide Contractor's coordination drawings, with color piping diagrams as installed. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
12. Design Data: Provide a listing in table of Contents for design data, with tabbed binder divider page and space for insertion of data.
13. Reports: Include test and balancing reports as specified.
14. Additional Requirements: As specified in individual Specification Sections.

G. Instruction of Owner's Personnel: Instruct Owner designated personnel to their full and complete understanding, procedures necessary to operate and maintain equipment and systems on continuing basis. Provide training of staff.

1. Schedule: Before final inspection, instruct Owner designated personnel in operation, adjustment, and maintenance of products, equipment, and systems, at agreed upon times. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
2. Basis of Information: Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
3. Instructional Material: Prepare and insert additional data in the manual when need for such data becomes apparent during instruction.

H. Equipment Data and Operation and Maintenance Instructions Submittals:

1. Submittals: Comply with administrative requirements specified in SECTION 013300 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
2. Preliminary Draft O&M Submittal: Submit electronic files of each manual at least **90** calendar days before commencing demonstration and training. Owner's Representative will review draft and return with comments.
 - a. The comments or corrections shall be incorporated into the Final O&M submittal.
 - b. Correct or revise each manual to comply with the Owner's Representatives comments. Submit electronic copies of each corrected manual within **15** calendar days of receipt of Owner's Representative's comments.
 - c. Owner's Representative will notify the **Contractor** when the edits have been accepted for incorporation into the final O&M submittal.
3. Advance Submittals: For equipment, or component parts of equipment to be put into service during construction and operated by Owner, submit documents within ten (10) calendar days after equipment approval.
4. Final O&M Submittal: After completion of instruction of Owner operation and maintenance personnel and final inspection, revise content of documents to include additional information deemed necessary from instruction experience of Owner's personnel and any changes made during construction. Submit each

manual in the final form prior to requesting inspection for Substantial Completion. The Owner's Representative will return comments electronically.

- a. Submit electronic copies of each manual prior to requesting training.

1.05 SPARE PARTS, EXTRA STOCK AND MAINTENANCE MATERIALS

- A. Products Required: Where called for in Contract Specifications, deliver to Owner's Representative, materials, etc., for use in maintenance work. Provide list of materials delivered to Owner's Representative, indicating date and acceptance by Owner's Representative.
 1. Provide quantities of products, spare parts, maintenance tools, and maintenance materials specified in individual Sections to be provided to Owner's Representative, in addition to that required for completion of the Work.
 2. Products supplied shall be identical to those installed in the Work. Include quantities in original purchase from supplier to avoid variations in manufacture.
 3. Provide itemized list of all spare parts, materials and transmittal to the Owner's Representative for acceptance.
- B. Storage, maintenance: Store products with products to be installed in the Work, as specified in SECTION 016100 – PRODUCT REQUIREMENTS: Product Storage and Protection.
- C. Delivery to site: Prior to final payment, deliver and unload spare products to project site. Coordinate with Owner's Representative and obtain receipt. Owner will handle and store products.

1.06 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 1. List of Documents: Include a table of contents for each O&M and emergency, operations listed per CSI Specification number.
 2. List of Systems and Subsystems: Include references to operation and maintenance manuals that contain information about each system.
 3. List of Equipment: List equipment for each system, organized by system. For pieces of equipment not part of system, list separately.
 4. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists,

assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

5. This Directory shall be submitted to the Owner's Representative for review and acceptance.

1.07 MAINTENANCE AGREEMENTS

- A. Prior to Closeout all Maintenance Agreements required by the Contract Documents shall be assembled and submitted electronically with the Closeout Submittal Requirements.

1. Provide all Maintenance Agreements in PDF form.
 - a. Submit individual files for each Maintenance Agreement with a directory assembled by CSI division.
 - 1) Combine all project Maintenance Agreements including the directory into one PDF for record.
 - 2) Files will be formatted for printing with a footer identifying the CSI number and Owner's project number.
 - 3) There will be a front cover to the file that contains all project information including the **Contractor** contact information.

1.08 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
 1. Type of emergency.
 2. Emergency instructions.
 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
 1. Fire.
 2. Flood.
 3. Gas leak.
 4. Water leak.
 5. Power failure.
 6. Water outage.
 7. System, subsystem, or equipment failure.
 8. Chemical release or spill.

- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits.
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

1.09 WARRANTIES AND GUARANTEES

- A. Warranties and Guarantees, general: Guarantees from subcontractors shall not limit **Contractor's** warranties and guarantees. Whenever possible, **Contractor** shall cause warranties of subcontractors to be made directly to Owner. If such warranties are made to **Contractor**, **Contractor** shall assign such warranties to Owner prior to final payment. When equipment and products, or components thereof, bear a manufacturer's warranty or guarantee that extends the time period of **Contractor's** warranty or guarantee, so state in the warranty or guarantee.
 - 1. Standard Product Warranties: Preprinted written warranties published by individual manufacturers for particular products and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranties: Written warranties required by or incorporated in Contract Documents, to extend time limits provided by standard warranties or to provide greater rights for Owner.
 - 3. Provisions for Special Warranties: Refer to General Conditions of the Contract for terms of **Contractor's** special warranty of workmanship and materials.
 - 4. Specific Warranty Requirements: requirements are included in the individual Sections of Division 2 through 49 of the Contract Specifications, including content and limitations.
 - 5. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve **Contractor** of warranty on work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractor's requirement to countersign special warranties with **Contractor**.
 - 6. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.
 - 7. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to original warranty with an equitable adjustment for depreciation.
 - 8. Replacement Cost: On determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents. **Contractor** shall be responsible for cost of replacing or rebuilding defective work regardless of whether Owner has benefited from use of the work through part of its useful service life.

9. Owner Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which Owner can enforce such other duties, obligations, rights, or remedies.
 10. Rejection of Warranties: Owner reserves right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
 11. Owner reserves right to refuse to accept work where a special warranty, or similar commitment is required, until evidence is presented that entities required to countersign commitments are willing to do so.
 12. When designated portion of Work is completed and occupied or used by separate agreement with **Contractor** during the construction period, submit properly executed warranties to Owner's Representative within fourteen (14) calendar days of completion of that designated portion of the Work.
 13. Submit written guarantees, in the form contained at end of this Section.
- B. Form of Warranty or Guarantee: All written warranties and guarantees, excepting manufacturers' standard printed warranties and guarantees, shall be submitted on **Contractor's**, subcontractor's, material supplier's, or manufacturer's own letterhead, addressed to Owner. Warranties and guarantees shall be submitted in duplicate and complying with the form letter following. Warranty and guarantee letters shall be signed by all responsible parties and by **Contractor** in every case, with modifications only as approved by Owner to suit the conditions pertaining to the warranty or guarantee.
- C. Submission requirements:
1. **Contractor** shall collect and assemble required warranties, guarantees, bonds, and service and maintenance contracts. Provide PDF electronically signed or signed and scanned copies of each. Organize documents into an orderly sequence based on the table of contents of the Project Manual CSI divisions.
 2. Table of Contents: Provide PDF electric file with links to individual warranty sections. Include the following information.
 - a. Product or Work item.
 - b. Product or work suppliers firm name, address, telephone number and name of principal.
 - c. Scope of guarantee, bond, service or maintenance agreement.
 - d. Date of beginning of guarantee, bond, service or maintenance contract.
 - e. Duration of guarantee, bond, service or maintenance contract.
 - f. **Contractor's** name, address, telephone number and name of principal.
 - g. Provide information for Owner personnel:
 - 1) Proper procedure in case of failure.
 - 2) Circumstances that might affect validity of guarantee or bond.

D. Warranty Submittal

1. Provide all warranties in PDF composite electronically indexed files.
 - a. Submit individual files for each warranty with a directory assembled by CSI division.
 - 1) Combine all project warranties including the directory into one PDF for record
 - 2) Files will be formatted for printing with a footer identifying the CSI Number and Owner's Project Number.
 - 3) There will be a front cover to the file that contains the title "WARRANTY, GUARANTEE AND BOND" as well as all project information including the **Contractor** contact information. Title of Project and UC Davis Health Project Name and Number.
 - 4) Coordinate copies of each warranty to be included in operation and maintenance manuals.
 - 5) Final Submittal shall be incorporated into one PDF, bookmarked and searchable document.

- F. Time of Submittals: Submit **60** calendar days prior to request for final payment. When work activity is delayed materially beyond date of Substantial Completion, provide updated submittal within ten (10) calendar days after Final Completion, listing date of Final Completion as the start of the Guarantee period.

1.10 AS-BUILT DOCUMENTS

A. Definitions:

1. The terms "As-Built Documents" or "As-builts" shall mean the marked-up version of the Contract Documents prepared by **Contractor** to record as-built conditions, changes, and selections made during construction.

B. Preparation of data shall be done by person(s):

1. Trained and experienced in the maintenance, preparation, and submittal of As-Built Documentation.
2. Familiar with requirements of this Section.

C. As-built Documents Content:

1. As-built Drawings and Specifications
2. As-built Schedule
3. Miscellaneous As-Built Submittals

D. As-Built Drawings and Specifications: Provide a complete set of As-Built Drawings and Specifications, showing and noting every change from the Contract Set, including but not limited to:

- Changes made in response to RFI's
- Amended Construction Documents (ACD) and related RFI's
- Change Orders/Field Orders and related RFI's.
- Architect's Supplemental Information (ASI) and related RFI's.
- Changes to locations, including access panels, windows, doors, plumbing, etc.
- Changes caused by obstructions and the obstructions notated
- Changes made in response to inspections
- Final dimensions
- Deferred Submittals (see "Miscellaneous As-Built Submittals" below)
- Shop Drawings (see "Miscellaneous As-Built Submittals" below)
- Final product selections

1. Format Requirements:

- a. Provide in PDF format with bookmarks. All annotations shall be neat and legible.
- b. File naming conventions:
 - 1) Drawings: YY_MMDD_Owner's Project Number_As-Built_Dwgs
 - 2) Specifications: YY_MMDD_Owner's Project Number_As-Built_Spec
- c. Provide text (preferably 1/4" or larger) on each drawing and on the cover of the specifications indicating the submission date, the Owner's Project Number, and the term "As-Built". The text shall be the same size and general location on all sheets of the drawings and care should be taken to locate the text in a place as to not obscure text or linework on the drawings.
- d. Bookmarks: Provide bookmarks in the following format:
 - 1) Drawings: Sheet Number – Sheet Name. Do not add additional categories or disciplines.
 - 2) Specifications: The first page of each section shall be bookmarked with: Section Number – Section Name.
 - Exception: If a hyperlinked Table of Contents is provided the bookmarks may be excluded.
- e. Supplemental sheets: When adding a supplemental sheet containing sketches or other information that describe changes to

the Contract Documents:

- 1) Provide a two-digit numerical suffix that starts with .01 and ascends for every supplemental sheet:
Example: If the supplemental sheet contains sketches that describe changes to the hypothetical sheet "A1-01" the first supplemental sheet will be numbered "A1-01.01".
- 2) The sheet name and number are to be similar in text size and location to the sheet being supplemented.
- 3) Include supplemental sheets in bookmarks.

E. As-Built Schedule: Provide As-Built schedule per SECTION 013200 CONTRACT SCHEDULES

1. Format Requirements:

- a. Schedule to be in PDF format.
- b. File naming conventions:
 - 1) YY_MMDD_ Owner's Project Number_As-Built_Schedule

F. As-Built Shop drawings:

1. Format Requirements:

- a. File naming convention for shop drawings:
 - 1) YY_MMDD_ Owner's Project Number_ShopDwg_Spec
Section Number

G. As-built Documents Submittal: Submit all As-Built Documents together after Final Completion and in accordance with SECTION 017700 CLOSEOUT PROCEDURES. Allow 10 business days for initial review and for each resubmittal.

1.11 AS-BUILT PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
1. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
2. Format: Submit Product Data as annotated PDF electronic file Include As-Built Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.
- 3.

1.12 PHOTOGRAPHS

- A. General: Prior to Closeout all photographic documentation required per 013220 Construction Progress Reporting shall be assembled and submitted with the Closeout Submittal Requirements.

1.13 CONSENT OF SURETY AND FINAL CERTIFICATES

- A. General: Prior to closeout Consent of Surety and Final Certificates required by the Contract Documents shall be assembled and submitted with the Closeout Submittal Requirements.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 Refer to the following attachments

- A. Guarantee
- B. Report of Work Required by Warranty

END OF SECTION 017800

GUARANTEE

Project Title: _____

Project Location: _____

Project Number: _____ DATE: _____

GUARANTEE FOR _____ (the "Contract"),
 (Specification SECTION and Contract No.)
 between The County of Lake ("Owner") and

 (Name of **Contractor** or Subcontractor)

hereby guarantees to Owner that the portion of the Work described as follows:

which it has provided for the above referenced Project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specification SECTION _____ and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____ months after the date of the guarantee the undersigned receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize Owner to undertake such correction, repair, or replacement at the expense of the undersigned; and **Contractor** will pay to Owner promptly upon demand all costs and expenses incurred by Owner in connection therewith.

SUBCONTRACTOR

Signed: _____ Title: _____

Typed Name: _____

Name of Firm: _____

Contractor License Classification & Number: _____

Address: _____

Telephone Number: _____

CONTRACTOR

Signed: _____ Title: _____

Typed Name: _____

Name of Firm: _____

Contractor License Classification & Number: _____

Address: _____

Telephone Number: _____

REPORT OF WORK REQUIRED BY WARRANTY

To:	Joseph Cooper, Owner Representative
From:	

[illegible]

Prepared by: _____
(Print Name) Signature Date

In accordance with the terms and conditions of the Contract, the **Contractor** has agreed that, if at any time within _____ months after the date of the guarantee the **Contractor** receives notice from Owner that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the **Contractor** will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

Prompt notification to be provided by the Owner Representative to the appropriate **Contractor**.

SECTION 01 82 00

DEMONSTRATION AND TRAINING

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for Demonstration of Equipment Operation and Instruction of Owner Personnel.

1.02 RELATED SECTIONS

- A. Section 017800 – CLOSEOUT SUBMITTALS
- B. Section 018100 – PLUMBING/HVAC TESTING PROCEDURES

1.03 SUBMITTALS

- A. Submit preliminary schedule for Owner Representative approval, listing times and dates for demonstration of each item of equipment and each system, in writing, minimum of thirty (30) calendar days prior to activities.
- B. Submit reports and videos within (14) calendar days after completion of demonstrations and instructions. Give time and date of each training session, and hours devoted to training with a list of persons present and the corresponding video.

1.04 QUALITY ASSURANCE

- A. Equipment installed under Contract shall operate quietly and free of vibration. Adjust, repair, balance properly, or replace equipment producing objectionable noise or vibration in occupied areas of building. Provide additional brackets, bracing, etc., to prevent such noise or vibration. Systems shall operate without humming, surging or rapid cycling.
- B. Owner will provide list of personnel to receive instructions and will coordinate their attendance at agreed-upon time.

PART II - PRODUCTS – Not Applicable to this Section

PART III - EXECUTION

3.01 PREPARATION

- A. Verify equipment has been inspected, commissioned, and put into operation.
- B. Send approved pdf version of completed operation and maintenance manual 7 calendar days prior to training.

3.02 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of equipment and systems to Owner two (2) weeks prior to date of final inspection. For equipment requiring seasonal operation, perform instructions for other seasons within six (6) months of completion.
- B. Use operation and maintenance manuals as basis of instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance. Display on a video screen and demonstrate the use of bookmarks and searches to find information being sought.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times, at equipment location.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

END OF SECTION 01 82 00

SECTION 01 91 00

COMMISSIONING

PART I - GENERAL

1.01 SUMMARY

- A. Commissioning (Cx) is the process of ensuring that all building systems are installed and perform interactively according to the design intent; those systems are efficient, cost effective and meet the Owner's Project Requirements and operational needs; that the installation is adequately documented; and that the operations staff are adequately trained. This is achieved by a full understanding of all building systems through construction, acceptance and warranty period with actual verification of performance. It also establishes testing and communication protocols in an effort to advance the building systems from installation to full dynamic operation and optimization.
- B. The Commissioning process does not relieve responsibility of the **Contractor** to provide a finished and fully functioning Project. The **Contractor** and Subcontractors provide the quality control for installation and start-up of the building systems.
- C. The specified commissioning activities shall demonstrate compliance with the Owner and California Code Commissioning requirements.
- D. Commissioning is a condition of the Contract and shall not be excluded from the base bid.
- E. Commissioning requirements extend to all alternates and change orders, as well as all subcontracts and purchase orders for work under the **Contractor's** control.
- F. Related Documents:
 - 1. Division 00 Procurement and Contracting Requirements, apply to this Section.
 - 2. Drawings and general provisions of Contract, and other Division 01 Specification Sections, apply to this Section.
 - 3. Technical Divisions of the Specifications apply to this Section.

1.02 DEFINITIONS

- A. Acceptance Phase: This is the phase of the project when the facility and its systems and equipment are inspected, tested, verified, and documented, and when most of the Functional Performance Testing (FPT) and final training occurs. This will generally occur after the Construction Phase is complete (i.e., start-up and checks have been accomplished). The Acceptance Phase typically begins with certification by the **Contractor** that the systems have been started in accordance with the approved protocols and the submission of the documentation of that start-up. The Acceptance Phase ends with the successful completion of all FPT and sign-off by the CA and the Owner.
- B. Action Item: Any issue that requires a response, completion, corrective or additional work, or any other action. Examples include a Request for Information (RFI), a work directive, a clarification request, a to-do item, an identified deficiency, or any other like item. Action Items must be categorized as appropriate.
- C. Action List: This is a list that is maintained and updated by the CxA that includes all Action Items that relate to Cx activities.
- D. Commissioning (Cx): The process of ensuring that all building systems perform interactively according to the design intent and that the system operations are efficient and cost effective and meet the Owner's functional needs.
- E. Commissioning Agent (CxA): The individual retained by the Owner who will oversee the Cx process, develop and stipulate many of the Cx requirements (including FPTs), manage the Cx process, and ensure and verify that systems and equipment are installed, and tested to meet the Owner's requirements.
- F. Commissioning Coordinator (CC): The **Contractor** shall provide a Commissioning Coordinator. The CxA, the Owner's Representative and the CC will comprise a commissioning management team. While the CxA leads the overall commissioning process, the CC is responsible for managing contractors in their day-to-day performance of the specified commissioning work. The CC is an employee of the **Contractor** who is regularly and frequently on site. Qualifications for the Commissioning Coordinator include experience and excellent abilities to schedule, coordinate and manage subcontractors. The following tasks are some of the critical items included in the CC's scope of work:
1. Integrating the specified commissioning activities into the overall contract construction schedule, updating the schedule and providing three-week look-ahead schedules showing the upcoming commissioning related activities.
 2. Providing all commissioning submittals to the Owner's Representative and CxA.
 - a. O&M Manuals per Division 017700 Close-out Procedures and 017800 Close-out Submittals

3. Coordinating Owner training and ensuring that training is provided in accordance with the Division 017700 Close-out Procedures and the technical specifications.
 4. Ensuring that subcontractor and supplier review and complete the CxA provided FPT procedures and forms then submitted in accordance with the specifications. This includes providing written comments (even if no exception is taken) regarding issues pertaining to safety, equipment protection/warranty and appropriateness of the procedure for the systems as provided from all required FPT participants for each FPT.
 5. Coordinating development and submittal of specified flushing, cleaning and start-up procedures and ensuring that these procedures are completed, and documentation is submitted.
 - a. Providing test reports and progress reports in accordance with the 017800 Close-out Submittals, commissioning, and technical specifications.
 6. Managing the **Contractor** participation in the FTP process in accordance with the commissioning specifications.
 7. Managing the **Contractor** participation in resolution of issues identified during pre-commissioning meetings and during the commissioning process.
 8. Ensuring that subcontractors perform preliminary testing to verify readiness for final FPT demonstrations, submitting documented verification that systems will pass functional tests with acceptable results as documented in the FPTs and coordinating the demonstration of the FPTs to the Owner and the CxA.
 9. Coordinating repeat FPTs that fail due to contract deficiencies until acceptable results are achieved and managing the reimbursement of the Owner's costs for repeated tests in accordance with the commissioning specifications.
- G. Commissioning Plan: This is a detailed document prepared and maintained by the CxA that describes the entire commissioning process.
- H. Commissioning Specifications (Cx specs): Includes the Cx specification section and Cx-related subsections of other specifications. All **Contractor** requirements relating to Cx.
- I. Commissioning Team: The parties involved in the commissioning process for any given system. The Cx Team will include a core group involved with all systems. This core group will typically include the CxA, the Owner's Cx coordinator, and **Contractor** CC and/or MEP Coordinator. At any given point the team may include the project manager, members of the design team, the project inspector, product representatives, and operation and maintenance personnel.
- J. **Contractor**: As used herein, **Contractor** is a general reference to the installing parties and can therefore refer to the **Contractor**, the subcontractors, or vendors as inferred by its usage.

- K. Construction Phase: Phase of the project during which the facility is constructed and/or systems and equipment are installed and started. **Contractor** and subcontractors complete the installation complete start-up documentation, submit O&M information, establish trends, and perform other applicable requirements to get the systems started. The Construction Phase will generally end upon completed start-up and TAB of systems and equipment.
- L. Contract Documents: The documents governing the responsibilities and relationships between the parties involved in the construction of the project including, but not necessarily limited to, the agreement/contract, construction plans and drawings, specifications, addenda, and change orders.
- M. Deficiency: A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents.
- N. Functional Completion: A milestone that marks the completion of the Acceptance Phase and successful documentation of the FPTs by the CxA.
- O. Functional Performance Testing (FPT): This process verifies that the systems within the commissioning scope function in accordance with the Contract Documents, the Owner's design intent and the Design Team's Basis of Design. The process includes the documented testing of the systems under actual and simulated operating conditions. Functional Performance Test (FTP) procedures are detailed instructions that allow experienced system technicians to perform the FPTs with repeatable results. The repeatability of the procedures and results validate the tests. Final performance testing of systems will begin only after the **Contractor** certifies that such systems are completely installed and ready for functional testing and after the CxA has completed the subsequent installation verification process for the systems to be tested.
- P. Installation Verification Process: This process includes the on-site review of related system components for conformance to the Contract Documents. Upon receipt of the completed **Contractor's** System Readiness Manual, the CxA will conduct this review and verify system readiness for final functional testing procedures. The CxA will document issues identified during this process and assign them to the appropriate party for resolution.
- Q. MEP Coordinator: **Contractor's** staff member who is responsible for all MEP equipment and system installation, coordination, and start-up is the primary contact for the Cx Agent and shall be responsible to organize and lead the start-up and commissioning meetings, tracks response to Action Items from Cx Agent and generate minutes.
- R. Ready to Commission statement: The subcontractor's written statement, through the System Readiness Checklist (SRC), that the equipment or system described has been completely installed, started, and tested to ensure that it has met all the requirements of the contract documents and is ready for commissioning.
- S. Start-up: Refers to the quality control process whereby the **Contractor** verifies the proper installation of a device or piece of equipment, executes the manufacturer's starting procedures, completes the start-up checklists, energizes the device, verifies it is in proper working order and ready for dynamic testing, and completes the start-up tests.

- T. System Readiness Checklists (SRCs): These checklists are provided by the CxA and include equipment installation and start-up items specified to be performed and verified by the **Contractor**. These checklists shall be compiled along with associated start-up forms by the **Contractor** to create the **Contractor's** System Readiness Plan. They shall be completed during installation and returned to the CxA as components of the **Contractor's** System Readiness Manual prior to the final CxA installation verification and functional performance testing process.
- U. System Readiness Manual: This document includes, for each system within the commissioning scope of work, completed and signed versions of each form submitted by the **Contractor's**.
- V. System Readiness Plan: This document shall be completed by the **Contractor** and submitted to the CxA prior to the final installation verification and functional performance testing process. By submitting these completed forms, the **Contractor** signals that the relevant systems are installed, operational and will meet functional testing acceptance criteria. The System Readiness Plan is compiled by the **Contractor** and includes, for each system within the commissioning scope of work, the System Readiness Checklists provided by the CxA, followed by the associated **Contractor's** Start-up and Test Forms. The **Contractor** System Readiness Plan shall be submitted to the CxA for review and approval prior to installation of the systems.

1.03 REFERENCES

- A. American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE):
 - 1. ASHRAE Guideline 0-2013, The Commissioning Process
 - 2. ASHRAE Guideline 1.1-2007, HVAC&R Technical Requirements for The Commissioning Process.
 - 3. ASHRAE Standard 202-2013, Commissioning Process for Buildings and Systems
- B. US Green Building Counsel (USGBC), Leadership in Energy and Engineering Design (LEED):
 - 1. Reference Guide for the version of LEED pursued by project.
- C. California Building Standards Code (California Code of Regulations, Title 24):
 - 1. Part 6, Building Energy Efficiency Standards for Residential and Nonresidential Buildings
 - 2. Part 11, CALGreen

1.04 SYSTEMS TO BE COMMISSIONED

- A. All systems and equipment identified in the contract documents as having quality assurance or acceptance testing requirements are included in SYSTEMS TO BE COMMISSIONED by reference.
- B. All systems and equipment identified in the contract documents as requiring startup are included in SYSTEMS TO BE COMMISSIONED by reference.
- C. All systems and equipment identified in the contract documents requiring training are included in SYSTEMS TO BE COMMISSIONED by reference.
- D. Commissioning shall be system based.
 - 1. Equipment and sub-assemblies are to be installed, started, and tested as components of each respective system rather than as a category of equipment or by specification section.
- E. The systems to be commissioned shall include but are not limited to the following:
 - 1. Air Handling Units
 - 2. Exhaust Fans
 - 3. HTHW Heat Exchangers
 - 4. Pumps
 - 5. Fan Coils
 - 6. Terminal Devices (VAV boxes)
 - 7. Sump Pumps
 - 8. Air Transfer Fans
 - 9. Hot Water Heaters
 - 10. Building Control System - Direct Digital Control System
 - 11. Energy Management System
 - 12. Hydronic Systems
 - 13. Heat Exchangers
 - 14. Automated Lighting control systems
 - 15. Emergency generators
 - 16. Transfer switches
 - 17. Utility Meters and sub-metering system

18. VFDs
19. Power to Mechanical Systems
20. Lighting Inverter
21. Irrigation Systems
22. Solar Photovoltaic Power Systems
23. Domestic Hot Water Systems
24. VRF Systems
25. Radiant Heaters
26. Heat Recovery boxes
27. Irrigation systems
28. Renewable Energy Systems
29. Fire alarm / Fire Detection System.
30. Data Systems.
31. Audio/Visual Systems.
32. Intercom / Telecom Systems.
33. Miscellaneous Low Voltage Systems.
34. Other Systems as Specified.

1.05 CONSTRUCTION AND ACCEPTANCE PHASE COMMISSIONING

- A. The **Contractor** will be an active participant in the construction and acceptance phase commissioning activities. The commissioning tasks and responsibilities include following:
1. Respond to requests from the CxA for interpretation/clarification of equipment selection and sequence of operation during functional performance test development.
 2. Review, and provide direction as necessary on, the functional performance tests developed by the CxA for conformance with the design intent, within an agreed time interval.
 3. Supporting the commissioning process by diligently executing the contract requirements to provide a fully functional facility ready for testing and working closely with the commissioning team to integrate the commissioning process into the project delivery schedule.
 4. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
 5. Cooperate with the CxA for resolution of issues recorded during the commissioning process.
 6. Schedule and attend commissioning kick-off meeting and commissioning coordination meetings.
 7. Integrate and coordinate commissioning process activities with construction schedule.
 8. Develop quality assurance process to verify and document proper installation, access, startup, adjusting, check out and maintenance of commissioned systems.

9. The CxA will develop the System Readiness Checklist (SRC) forms for each system within the commissioning scope of work. These forms summarize specific aspects of the installation of each system that the **Contractor** must verify prior to conducting functional performance testing. The SRC forms will be submitted to the **Contractor** and subcontractors for review and comments and subsequently compiled into the System Readiness Plan.

As part of the commissioning submittals, the **Contractor** shall submit a System Readiness Plan to the CxA. This document is typically a binder organized into sections with one section per system, each of which includes the SRC for that system followed by Manufacturer – or installation subcontractor-provided installation checklists, detailed start-up procedures, blank TAB forms and other project specific test forms. The CxA will review the System Readiness Plan and document any missing or erroneous forms. After the **Contractor** provides the correct forms, the CxA will provide final approval and acceptance of the System Readiness Plan for use by the **Contractor** and/or installation subcontractors. Once approved, the System Readiness Plan is subsequently referred to as the System Readiness Manual.

10. Review and accept commissioning functional performance test procedures provided by the CxA.
11. Ensure cooperation and participation of specialty subcontractors.
12. Provide to CxA a completed Functional Verification Checklist certifying that for all (listed) systems and equipment to be commissioned, that all systems, subsystems, equipment, and controls are ready for testing.
13. Ensure participation of major equipment manufacturers in appropriate training and testing activities.
14. Execution of the Functional Performance Test protocols for CxA to witness.
15. Manage every aspect of the training program including being responsible for all training requirements. An outline of the training requirements shall be developed with the Owner and CxA.
16. Responsible for developing and implementing a formal equipment maintenance program to ensure that all equipment specified to be installed on the project is received and maintained in good working order until accepted by the Owner.

1.06 SUBMITTALS

- A. The **Contractor** shall provide the CxA a list of required equipment/system submittals to the CxA. The CxA will identify submittals to be submitted to the CxA concurrent with submission to the Owner's Representative for review.
- B. The **Contractor** shall provide the CxA the requested submittals for the CxA concurrent review, with submission to the Owner for review
- C. One set of searchable and bookmarked electronic file of coordination drawings which includes all commissioned systems e.g., mechanical, electrical, fire protection, plumbing, and telecom.
- D. Names of **Contractor** and subcontractor's personnel who will be responsible for the start-up and commissioning of the facility. To include names, email, and telephone contact information.
- E. Start-up and commissioning schedule. To include detailed plan of the sequence of construction with start and completion dates for each phase.
- F. Start-up forms for equipment and systems installed in the building. Documents to be used by sub-contractors to ensure that the building complies with the requirements of the contract documents.
- G. All Subs, through the **Contractor**, shall submit required installation, start-up, and preventive maintenance equipment data sheets to the CxA within 45 calendar days of equipment acceptance by the Owner.
- H. All Subs, through the **Contractor**, shall submit initial O&M data for system and equipment being commissioned under this specification. Initial O&M data shall be submitted within 45 calendar days of equipment acceptance by the Owner, but no less than 8 weeks prior to the beginning of functional testing.
- I. The **Contractor** shall submit an electronic copy of the construction meeting minutes, updated construction schedule, RFI log, and Bulletin log to the CxA within seven (7) calendar days of each meeting or update.
- J. **Contractor** shall submit an electronic copy of training plan and training materials to the CxA for review and approval prior to providing training.
- K. Consolidated close out list with all training, Final O&M manuals, As-Built documentation and surplus stock listed by spec section. Information to be compiled from the specifications.

PART II - PRODUCTS**2.01 TEST EQUIPMENT**

- A. The **Contractor** shall supply all personnel and equipment for the demonstration and testing, including, but not limited to, tools, instruments, ladders, lifts, computers, software, cables, etc. **Contractor** supplied personnel must be competent with and knowledgeable of all project-specific systems, and automation hardware and software. All training documentation, O&Ms, and submittals shall be at the job site before functional testing commences.
- B. All standard testing equipment required to perform startup and initial checkout and required functional performance testing shall be provided by the division contractor for the equipment being tested. For example, the mechanical contractor of Division 23 shall ultimately be responsible for all standard testing equipment for the HVAC system and control systems in Division 23.
- C. Special equipment, tools and instruments (only available from vendor/Subs, specific to a piece of equipment) required for testing equipment, according to these Contract Documents shall be provided by the **Contractor** and left on site, for the CxA to use during functional testing, seasonal testing, and deferred testing. The equipment, tools, and instruments will be returned to the vendor/Subs after successful conclusion of the commissioning effort.
- D. The controls contractor shall provide the CxA with temporary software license to be loaded on the CxA's computer, and any necessary network connection cables, for accessing the direct digital control system field panels for system testing. The controls contractor shall also provide a palm device (if applicable) with attachments, software, and cables, to check setpoint values of terminal device controllers. The controls contractor shall provide the CxA with log on ID, password, and LAN IP connection criteria for remote connection to direct digital control system. All the software, cables, and modems provided to the CxA will be returned at the successful conclusion of the commissioning effort.
- E. All testing equipment used by the contractors shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Contract Document Specifications (Project Manual). If not otherwise noted, the following minimum requirements apply to test and measurement equipment: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.1°F and a resolution of + or - 0.1°F. Pressure sensors shall have an accuracy of + or - 2.0% of the value range being measured (not full range of meter) and have been calibrated within the last year. All equipment shall be calibrated according to the manufacturer's recommended intervals. Calibration tags shall be affixed or certificates readily available.

PART III - EXECUTION**3.01 AFTER AWARD OF CONTRACT**

- A. The **Contractor** shall identify the person on their staff who will serve as the Commissioning Coordinator (CC). This person shall be responsible for all startup and commissioning issues on the project. Specific duties are identified in Part 1 of this Section.
- B. Within the first 30 calendar days of the project the **Contractor** shall meet with the Owner and the commissioning agent to discuss the process to be used on the project for managing communication to and from the Cx agent. This is to include the means for communication issues, commissioning reviews, processing submittals, RFIs, change orders, etc., meeting minutes, schedule information, Cx agent observations, and the action item lists. If a mutually agreeable process cannot be agreed upon, the Cx agent's process and software tools will be utilized.
- C. Within the first 60 days of the project there will be a meeting of the GC, the Cx agent and the key subcontractor's personnel to review how the Cx process will be implemented on the project and how the communication and documentation requirements will be met. The subcontractors are expected to send the staff that will be participating in the start-up and commissioning meetings.
- D. The **Contractor** will submit a schedule listing the key startup and Cx activities. The initial schedule can be general in nature. As the project progresses, the details on the schedule must be sufficient to list the activities of each **Contractor** for each phase of the project and what work must be accomplished before each listed task.
- E. The **Contractor** is to identify the team members from each subcontractor who will be participating in the start-up and commissioning meetings. This list is to include the name and contact information for the subcontractor's commissioning coordinator.
- F. The **Contractor** is to compile a listing of all factory tests that will take place prior to the start of the start-up and commissioning meetings. The consolidated list, along with an approximation of when they are expected to take place, shall be forwarded to the Cx agent.

3.02 Cx MEETINGS

- A. Eight weeks prior to supplying potable water to the building or the permanent power, the Commissioning Coordinator (CC) will schedule the first start-up and commissioning meeting. The meetings will not be concurrent with the **Contractor's** MEP coordination meeting and are to be scheduled at a mutually agreeable time between the **Contractor**, the Cx agent, and the Owner.

- B. The meetings will initially be held every second or third week as appropriate, and then increase in frequency to weekly as the bulk of the start-up and commissioning work is taking place.
- C. During each meeting an updated start-up and commissioning schedule will be distributed. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- D. During the meetings a consolidated training, O&M, and attic stock list drawn from the contract document requirements will be distributed. Decisions on the O&M review, when the training will take place, and how the stock will be turned over the Owner will be made based on this document. In addition to the hard copies distributed at the meeting, an electronic version shall be forwarded to the Cx agent and the Owner.
- E. Minutes of the start-up and commissioning meetings will be generated and distributed by the Commissioning Coordinator (CC). The minutes are to incorporate findings from the Cx agent. In addition to the hard copies distributed at the meeting, electronic versions shall be forwarded to the Cx agent and the Owner.
- F. The updated FPTs will be provided to the **Contractor** by the Cx agent.
- G. The **Contractor** and the subcontractors will be required to coordinate their activities, and work collaboratively, with the test and balance contractor hired by the Owner.
- H. The **Contractor** will coordinate the schedules for two review meetings to be led by the Cx agent. The first will be a comprehensive test and balance review and needs to include the mechanical subcontractor's wet and dry side foreman. The second meeting will be a controls review. This meeting is to be attended by the controls subcontractor's lead on the project and the programmer. Each meeting is to last at least two hours.

3.03 FIELD START-UP AND TESTING

- A. The dates for all field start-up activities shall be listed on the start-up and commissioning schedule.
- B. The CxA works with the Subs in developing startup plans and startup documentation formats, including providing the Subs with pre-functional checklists to be completed, during the startup process.
- C. The TAB contractor submits their TAB plan, along with the TAB Plan Review Checklist, for approval by the CxA prior to starting TAB work.
- D. In general, the checkout and performance verification proceeds from simple to complex, from component level to equipment to systems and intersystem levels with pre-functional checklists being completed before functional testing.

- E. The CxA shall review shop drawings and material certifications, review of reports from independent testing agencies, independent on-site periodic construction observation and attendance of selected quality control-related meetings (e. g., Pre-installation Conferences).
 - F. Pre-Functional Test Phase:
 - 1. The **Contractor** shall prepare the equipment and systems for start-up in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. Start-up shall be performed by the **Contractor's** and/or manufacturer's start-up technicians in accordance with the Contract Documents, industry standard guidelines and the guidelines of the equipment and systems manufacturers. The **Contractor** shall test the systems to verify that they perform in accordance with the Contract Documents, including the commissioning FPT procedures.
 - 2. The CxA will witness equipment start up and testing. The **Contractor** shall notify the CxA in writing at least fourteen (14) calendar days in advance of the start-up and testing dates so that the CxA can schedule attendance. If the CxA is not notified in advance of a scheduled start-up or testing activity, the start-up or testing shall be rescheduled and repeated to the satisfaction of the CxA. When scheduled start-up activities are not executed because of lack of preparation or coordination by the **Contractor**, the **Contractor** will be subject to back-charges in accordance with the Contract Documents.
 - 3. The **Contractor** shall complete and compile all start-up forms, test forms and SRCs for the System Readiness Manual and submit to the CxA.
 - 4. Upon receipt of the completed System Readiness Manual forms, the CxA will perform an Installation Verification by providing various inspections and back-checks of the completed System Readiness Manual forms. Issues notes during this process will be documented by the CxA in the Commissioning Issues Log.
 - 5. Upon acceptance of the System Readiness Manual, which includes the draft TAB report, functional performance testing shall be scheduled. Functional performance testing shall not commence until all critical issues identified during the Installation Verification process are resolved.
 - G. Upon completion of the start-up and contractually required work, the **Contractor** shall submit a 'Ready to Commission' document to the Owner for the Specific Equipment and/or system that is complete. It is only after this document is received that the FPTs will commence.
- 3.04 Functional Performance Testing:
- A. Functional Performance Testing of commissioned systems shall begin after all critical issues discovered during the installation verification process have been corrected.
 - B. The procedure for developing and performing the FPTs shall be as follows:
 - 1. The **Contractor** shall provide the equipment and commissioning submittals as specified in the Contract Documents.

2. The Commissioning Authority will draft the FPT procedures based on the **Contractor's** submittals as approved by the Design Team. The draft procedures will be submitted to the Commissioning Team for review.
3. Each **Contractor** and equipment supplier that is specified as an FPT participant in the FPT Summary Tables in the specifications shall participate in the development and performance of the associated FPTs. Each FPT participant shall provide written comments on the associated FPT procedures regarding each of the following issues:
 - a. Verify that the procedures can be performed without compromising the safety of the participants.
 - b. Verify that the procedures can be performed without compromising the warranties of equipment, components, and systems.
 - c. Verify that the procedures are appropriate for the equipment, components and systems as provided.
4. The CxA will complete the working drafts of the FPT procedures.
5. Subcontractors and suppliers shall provide the personnel, expertise and test equipment to operate and maintain the systems during testing.
6. The **Contractor** shall test all systems within the commissioning scope of work, using the FPT procedures until the acceptable results specified in the FPT procedure are verified and documented. If necessary to obtain acceptable results, the **Contractor** may consult with the CxA to acquire clarification and resolve issues. The CxA will be available for on-site assistance of this nature.
7. The **Contractor** shall submit documentation that verifies that the acceptable results specified in the FPT procedures have been verified and that they are ready to demonstrate the FPTs with acceptable results. Acceptable documentation consists of completed FPT record forms which document acceptable FPT results or indication on the Systems Readiness Checklists that the **Contractor's** pre-functional testing has verified that functional performance testing of the equipment and associated system demonstrate the acceptable results as specified.
8. After the CxA has accepted the **Contractor's** documentation of acceptable results, the FPT shall be conducted and demonstrated to the CxA. If acceptable results are not demonstrated for an FPT, the **Contractor** shall resolve the issue(s) and the demonstration shall be repeated.

9. The **Contractor** shall verify and document acceptable FPT results for all equipment components and systems. The FPTs may be demonstrated for a sample of the systems that comply with all of the following criteria. This process is referred to in this document as "demonstration sampling".
 - a. There shall be many of the systems with similar components that have identical sequences of operation which are implemented using identical control software programming.
 - b. The components and systems to be included in the Demonstration Samples will be chosen by the CxA at the time of demonstration.
 - c. The sample size will be in accordance with the Functional Performance Test (FPT) Demonstration Sampling Tables in the specifications.
 - d. Acceptable results must be demonstrated for the entire sample. If the FPT results are not acceptable due to a lack of preparation or coordination by the **Contractor** for any system or component sampled, the FPT shall be demonstrated for all the systems and components for which it was written. Whenever the demonstrated results are not acceptable, the **Contractor** shall make corrections and the FPT shall be demonstrated again. The cost of back-checking FPTs with unacceptable results is not included in the Commissioning Authority's scope of work. Back-charging applies to additional back-checking required due to lack of preparation by **Contractor**.
10. The CC is responsible for scheduling and coordinating functional testing activities. The **Contractor** shall demonstrate the FPTs after they have verified that performing the FPTs will yield the documented acceptable results. The **Contractor** is subject to back-charging, as specified herein, if acceptable results are not demonstrated because of work that should have been verified during pre-demonstration testing prior to the submittal of the System Readiness Manual. Acceptable results must be obtained during a single demonstration. No more than two delays of less than 15 minutes each are acceptable for each test.
 - a. In addition to conducting the functional tests developed by the CxA, the **Contractor** shall be required to complete all start-up and testing procedures as specified elsewhere in the Contract Documents.
 - b. Where the CxA requires BMS trending, the CxA will provide a points list within the FPT form that may include both hardware (input/output) and software (virtual) points and appropriate trending intervals.
11. The **Contractor** shall provide trend data to the CxA in electronic format. As a Owner approved alternative, the **Contractor** can provide the CxA remote access to the BMS and provide training that will allow the CxA to directly download trend data.
12. The CxA will analyze and review the trend data and associated system performance.

3.05 Cx AGENT Functional Performance Testing (FPT)

- A. Upon receipt of the Ready to Cx statement, the Cx Agent will coordinate a time with the **Contractor** to witness the FPTs.
- B. The CxA develops specific equipment and system functional performance test procedures. The **Contractor** and manufacturer review the procedures to make sure the tests are safe for the equipment provided.
- C. The functional test procedures are executed by the **Contractors**, under the direction of, and documented by the CxA.
- D. The CxA will direct a TAB verification, with support from the TAB **Contractor**, to verify the values reported in the final TAB report.
- E. Items of non-compliance in material, installation or setup are corrected at the Sub's expense and the system retested.
- F. All deficiencies noted will be tracked via the CxA issues log. The **Contractor** will be responsible for obtaining sign-off of corrected items.
 - 1. The **Contractor** is responsible for scheduling and coordinating commissioning activities. The **Contractor** shall reimburse the Owner for the cost of commissioning activities that must be repeated because of a lack of preparation or coordination by the **Contractor**. Reimbursable costs include CxA fees for services billed at the CxA's standard hourly rate. Activities subject to back-charging include: Repeated back-checking: Commissioning issues are documented in the Commissioning Issues Log. The **Contractor** shall submit a brief written statement describing when and how each issue has been resolved, which shall be added to the Issues Log maintained by the CxA. The CxA will back-check these issues on a one-time-per-issue basis to verify they have been resolved. If the back-checked issues that have not been resolved as reported, the associated cost of the unsuccessful back-check shall be subject to back-charging.
 - 2. Repeated installation verification: Once the **Contractor** has submitted the completed System Readiness Manual forms, the CxA will perform final installation verifications on selected systems. Discrepancies discovered will be reported in the Commissioning Issues Log. Back-checking the correction of these discrepancies shall be subject to back-charging.
 - 3. Repeated witnessing of FPT demonstrations: As specified in this section, the **Contractor** demonstrates the functional performance tests after they have verified that performing the FPTs will yield the documented acceptable results. The cost of witnessing demonstrations that do not demonstrate specified acceptance criteria shall be subject to back-charging.

3.06 SAMPLING

- A. As noted in the specifications, multiple identical pieces of non-life-safety or otherwise non-critical equipment will be functionally tested using a sampling strategy. Significant application differences and significant sequence of operation differences in otherwise identical equipment invalidates their common identity. A small size or capacity difference, alone, does not constitute a difference. It is noted that no sampling by Subs is allowed in pre-functional checklist execution.
- B. Sampling strategy referenced in the Specifications as the "xx% Sampling—yy% Failure Rule" is defined by the following example:
 - 1. xx = the percent of the group of identical equipment to be included in each sample.
 - 2. yy = the percent of the sample that if failing, will require another sample to be tested.
- C. The example below describes a 20% Sampling—10% Failure Rule.
 - 1. Randomly test at least 20% (xx) of each group of identical equipment. In no case test less than three units in each group. This 20%, or three, constitute the "first sample." If 10% (yy) of the units in the first sample fail the functional performance tests, test another 20% of the group (the second sample).
 - 2. If 10% of the units in the second sample fail, test all remaining units in the whole group. If at any point, frequent failures are occurring, and testing is becoming more troubleshooting than verification, the CxA may stop the testing and require the responsible Sub to perform and document a checkout of the remaining units, prior to continuing with functionally testing the remaining units.

3.07 FAILURE DUE TO MANUFACTURER DEFECT:

- A. If 10%, or three, whichever is greater, of identical pieces (size alone does not constitute a difference) of equipment fail to perform to the Contract Documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the **Contractor**, the Owner, the A/E, or the CxA. In such case, the **Contractor** shall provide the Owner with the following:
 - 1. Within one week of notification **Contractor** or manufacturer's representative shall examine all other identical units making a record of the findings. The findings shall be provided to the Owner within two weeks of the original notice.

2. Within two weeks of the original notification, the **Contractor** or manufacturer shall provide a signed and dated, written explanation of the problem, cause of failures, etc. and all proposed solutions which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation. The Owner will determine whether a replacement of all identical units or a repair is acceptable.
3. Two examples of the proposed solution will be installed by the **Contractor** and the PM will be allowed to test the installations for up to one week, upon which the Owner will decide whether to accept the solution. Upon acceptance, the **Contractor** and/or manufacturer shall replace or repair all identical items, at their expense and extend the warranty accordingly, if the original equipment warranty had begun. The replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

3.08 DEFERRED TESTING

- A. Unforeseen Deferred Tests: If any check or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of checklists and functional testing may be delayed upon approval of the Owner, A/E, and CxA. These tests will be conducted in the same manner as the seasonal tests as soon as possible.
- B. Seasonal Testing: During the warranty period, seasonal testing shall be completed as part of this contract. Seasonal testing is intended to test the performance of systems under full load conditions that cannot be simulated during the functional testing period. For example, it is impossible to test the heating system under full load conditions in July, so the heating system would be full load tested during the winter months. The CxA shall coordinate this activity. Tests will be executed, documented, and deficiencies corrected by the appropriate Subs, with facilities staff and the CxA witnessing. Any final adjustments to the O&M manuals and As-Builts due to the testing will be made by the **Contractor**.

3.09 TRAINING OF OWNER PERSONNEL

- A. The **Contractor** shall be responsible for training coordination and scheduling and ultimately for ensuring that training is complete. The CxA will be responsible for overseeing and approving the adequacy of the training of Owner personnel for commissioned equipment.
 1. Instructor capabilities shall be commensurate with level of instruction required. Instructor qualifications shall be submitted to Owner and CxA for review prior to training.
 2. The specific training requirements of Owner personnel by Subs and vendors as directed within the specifications.

3. Each Sub and vendor responsible for training shall submit a written training plan to the CxA for review and approval prior to training. The plan shall include the following elements:
 - a. Equipment (included in training)
 - b. Intended audience
 - c. Location of training
 - d. Objectives
 - e. Subjects covered (description, duration of discussion, special methods, etc.)
 - f. Duration of training on each subject
 - g. Instructor name and qualifications for each subject
 - h. Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
4. The CxA develops criteria for determining that the training was satisfactorily completed, including attending some of the training, etc. The CxA recommends approval of the training to the Owner.

3.10 COMMISSIONING ISSUES LOG:

- A. Issues identified during the commissioning process, including during site observations, pre-functional testing verification and functional testing, will be logged in the commissioning issues log. The CxA will maintain the master log. For each issue, the CxA will make a recommendation regarding who they believe is in the best position to provide the resolution. However, it is the **Contractor's** responsibility to manage issue resolution, including the determination of how the issue will be resolved and who will do the work.
- B. Each issue on the list will be classified with a "status" of either "resolved", "unresolved", or "resolved-unverified". "Resolved" issues are closed, having either been addressed by the **Contractor** and verified as corrected by the CxA or having been accepted by the Owner. "Resolved-unverified" issues have been reported as resolved by the **Contractor** but are not yet verified by the CxA as resolved. "Unresolved" issues have not been reported as addressed by the **Contractor**. Updated unresolved issues lists will be distributed to team in MS Word/Excel format.
- C. Material and method issues discovered during commissioning, but that pertain to **Contractor** construction shall be promptly reported to the A/E, CxA and the Owner's Representative.

- D. When a commissioning issue is resolved, the **Contractor** shall submit an updated list with a written response describing when and how the issue is resolved. The CxA or an applicable member of the Design Team shall then back-check the resolution of said issue. The CxA scope of work includes one back-check of issues that the **Contractor** reports as resolved. Back-charging applies to back-checking required due to lack of preparation of **Contractor**.

3.11 OPERATION AND MAINTENANCE MANUALS:

- A. The specific content and format requirements for the standard O&M manuals are detailed in Section 017800 Closeout Submittals. Special requirements for TAB contractor in appropriate Division 23 Sections and for the Controls contractor are found in appropriate Division 23 Sections. Electrical requirements are located in the appropriate Division 26 Sections. Refer to the specifications for additional O&M requirements.
 - 1. System Narrative. The **Contractor** shall include in the beginning of the O&M manuals a separate section describing the systems including:
 - a. A system narrative describing the type and function of the system.
 - b. Site information, including facility description and current requirements.
 - c. Simplified professionally drawn single line system diagrams on 8 1/2" x 11" or 11" x 17" sheets. These shall include chilled water distribution system, water system, condenser water system, heating system, supply air systems, and exhaust systems and others as designated. These shall show major pieces of equipment such as pumps, heat exchangers, humidifiers, control valves, expansion tanks, coils, service valves, etc.
- B. CxA Review and Approval. Prior to material completion, the CxA shall review the O&M manuals, documentation and redline As-Built for systems that were commissioned and list other systems documentation that the CxA should review to verify compliance with the Specifications. The CxA will communicate deficiencies in the manuals to the Owner or A/E, as requested. Upon a successful review of the corrections, the CxA recommends approval and acceptance of these sections of the O&M manuals to the Owner or A/E. The CxA also reviews each equipment warranty and verifies that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

3.12 CLOSE-OUT PROCESS

- A. All start-up documentation generated by the subcontractors shall be submitted to the Cx agent and the Owner in an electronic format.
- B. The sign-in sheets for all training sessions shall be submitted to the Cx agent and the Owner in electronic format.
- C. All training activities will be scheduled at mutually agreeable times between the **Contractor**, the Owner, and the Cx agent.

END OF SECTION 01 91 00



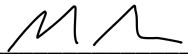
RE: LAKE COUNTY SHERIFF'S
ADMINISTRATION FACILITY

ACKNOWLEDGEMENT OF ADDENDA:

Wright Contracting LLC hereby acknowledges the receipt of the following Addenda:

- Addendum #1 dated October 10, 2024
- Addendum #2 dated November 5, 2024

Signed:



Mark Davis, President
Wright Contracting LLC

SECTION 00 41 13

PART 1 -

BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

- A. Bidder: Wright Contracting LLC
- B. Project Name: Lake County Sheriff's Administration Facility
- C. Project Location: 1431 Hoyt Avenue, Lakeport, CA 95453
- D. Owner: County of Lake
- E. Owner Project Number: 250816

1.2 CONSTRUCTION BID WORKSHEET

A.

CONSTRUCTION BID WORKSHEET - BID NO. 250816					
LAKE COUNTY SHERIFF'S ADMINISTRATION FACILITY					
Item No.	Description	Unit	Estimated Quantity	Unit Cost	Amount
1	Lump Sum Base Bid (Total)	LS	1		\$11,965,000
2	CSI Divisions 00 & 01 - GENERAL REQUIREMENTS (Base Bid Breakout, typical) <i>Cost Breakout by CSI Division is Not Required (typical)</i>	LS	1		
3	CSI Division 02 - EXISTING CONDITIONS <i>Not Required</i>	LS	1		
4	CSI Division 03 - CONCRETE <i>Not Required</i>	LS	1		
5	CSI Division 04 - MASONRY <i>Not Required</i>	LS	1		

BID FORM - STIPULATED SUM
(SINGLE-PRIME CONTRACT)
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BID RFI #31

BID RFI #31

6	CSI Division 05 METALS <i>Not Required</i>	LS	1		
7	CSI Division 06 WOOD, PLASTICS, AND COMPOSITES <i>Not Required</i>	LS	1		
8	CSI Division 07 THERMAL & MOISTURE PROTECTION <i>Not Required</i>	LS	1		
9	CSI Division 08 OPENINGS <i>Not Required</i>	LS	1		
10	CSI Division 09 FINISHES <i>Not Required</i>	LS	1		
11	CSI Division 10 SPECIALTIES <i>Not Required</i>	LS	1		
12	CSI Division 12 FURNISHINGS <i>Not Required</i>	LS	1		
13	CSI Division 13 SPECIAL CONSTRUCTION <i>Not Required</i>	LS	1		
14	CSI Division 14 CONVEYING EQUIPMENT <i>Not Required</i>	LS	1		
15	CSI Division 21 FIRE SUPPRESSION <i>Not Required</i>	LS	1		
16	CSI Division 22 PLUMBING <i>Not Required</i>	LS	1		
17	CSI Division 23 HEATING, VENTILATING, AND AIR CONDITIONING <i>Not Required</i>	LS	1		
18	CSI Division 26 ELECTRICAL <i>Not Required</i>	LS	1		
19	CSI Division 27 COMMUNICATIONS <i>Not Required</i>	LS	1		
20	CSI Division 28 ELECTRONIC SAFETY AND SECURITY <i>Not Required</i>	LS	1		
21	CSI Division 31 EARTHWORK <i>Not Required</i>	LS	1		

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BID RFI #31

22	CSI Division 32 – EXTERIOR IMPROVEMENTS <i>Not Required</i>	LS	1		
23	CSI Division 33 – UTILITIES <i>Not Required</i>	LS	1		
24	Add Alternate #1 – Elevator Maintenance Service Contract – 12 Months	LS	1		\$4,800
25	Add Alternate #2 – Elevator Maintenance Service Contract – 60 Months	LS	1		\$24,000
26	Add Alternate #3 – Solar / PV Parking Canopies (per pending Bid Addendum) <i>Not Required, will be bid separately</i>	LS	1		
27	Minimum Qualification – Completed Project #1: Project Name: Caritas Village Contract Value: \$32,246,977 Completion Date: October 31, 2022 Client Reference: Jennielynn Holmes Company: Catholic Charities Email: jholmes@srcharities.org Phone: (707) 308-4749				NA
28	Minimum Qualification – Completed Project #2: Project Name: Santa Rosa Community Health Vista Campus Fire Rebuild Contract Value: \$12,967,416 Completion Date: August 1, 2019 Client Reference: Elizabeth Friedrich Company: Santa Rosa Community Health Centers Email: elizabethf@srhealth.org Phone: (415) 948-4514				NA
29	General Contractor's Compensable Daily Rate times 30 Days = Provide Dollar Amount (Requested Information Only / Excluded from Base Bid Value)	LS	1		\$1,775

B.

1.3 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Owner, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances,

BID FORM - STIPULATED SUM
(SINGLE-PRIME CONTRACT)

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necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1.

<div>Eleven Million, nine hundred sixty five thousand and zero</div> <div>Dollars</div> <div>(\$ 11,965,000)</div>

1.4 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within Seven (7) days after a written Notice of Award and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:

B.

C. See Bid Bond Enclosed Dollars

D. (\$).

1.5 TIME OF COMPLETION

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Owner, and shall fully complete the Work between December 17, 2024 and April 17, 2026

1.6 ACKNOWLEDGMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:
1. Addendum No. 1, dated 10/10/24.
 2. Addendum No. 2, dated 11/05/24.
 3. ~~Addendum No. 3, dated~~ .

BID FORM - STIPULATED SUM
(SINGLE-PRIME CONTRACT)

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A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in California, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

A. Respectfully submitted this 12th day of November, 2024

B. Submitted By: Wright Contracting LLC (Name of bidding firm or corporation)

C. Authorized Signature:  (Handwritten signature)

D. Signed By: Mark Davis (Type or print name)

E. Title: President (Owner/Partner/President/Vice President)

F. Witnessed By:  (Handwritten signature)

G. By: Stephen Wright (Type or print name)

H. Title: Secretary / CFO (Corporate Secretary or Assistant Secretary)

I. Street Address: 3020 Dutton Avenue

J. City, State, Zip: Santa Rosa, CA 95407

K. Phone: (707) 528-1172

L. License No.: 1025609

M. Federal ID No.: 81-4712565 (Affix Corporate Seal Here)

BID FORM - STIPULATED SUM
(SINGLE-PRIME CONTRACT)
00 41 13 - 5/5

September 25, 2024

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE Wright Contracting LLC

_____ as Principal,
and Federal Insurance Company _____, as surety,

are held and firmly bound unto the County of Lake in the penal sum of five percent (5%) of the total amount of the bid of the Principal above named, submitted by said Principal to the County of Lake for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the County of Lake to which said bid was submitted, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. In no case shall the liability of the surety hereunder exceed the sum of \$ Ten Percent of Amount Bid (10%).

The condition of this obligation is such that, whereas the Principal has submitted the above-mentioned bid to the County of Lake, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at Lakeport, California, for the Sheriff's Administration Facility Project, Bid No. 250816.

NOW, THEREFORE, if the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files two bonds with the County of Lake, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this
23rd _____ day of October _____, A.D. 2024.

(Seal)

Mark Davis, President (Seal)

Wright Contracting LLC (Seal)

PRINCIPAL

(Seal)
Claudine Gordon, Attorney-In-Fact

Federal Insurance Company (Seal)

SURETY

ADDRESS 202B Halls Mill Rd., 2nd FL-N, Whitehouse Station, NJ 08889

END OF DOCUMENT 00 43 13

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Sonoma)

On October 23, 2024 before me, Kristie Phillips, Notary Public
(insert name and title of the officer)

personally appeared Claudine Gordon,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

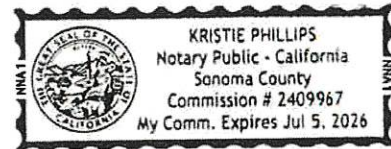
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature



(Seal)





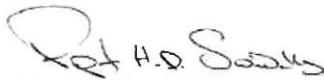
Power of Attorney


Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint **Michael K. Feeney, Claudine Gordon, Kristie Phillips and Sara Swanson of Santa Rosa, California** -----

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** have each executed and attested these presents and affixed their corporate seals on this 6th day of **May, 2024**.


Rupert HD Swindells, Assistant Secretary


Warren Eichhorn, Vice President



STATE OF NEW JERSEY
County of Hunterdon

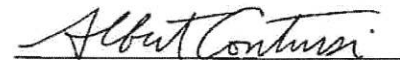
SS.

On this 6th day of **May, 2024** before me, a Notary Public of New Jersey, personally came **Rupert HD Swindells** and **Warren Eichhorn**, to me known to be Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY**, the companies which executed the foregoing Power of Attorney, and the said **Rupert HD Swindells** and **Warren Eichhorn**, being by me duly sworn, severally and each for himself did depose and say that they are Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



Albert Contursi
NOTARY PUBLIC OF NEW JERSEY
No 50202369
Commission Expires August 22, 2027


Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY**, and **PACIFIC INDEMNITY COMPANY** on August 30, 2016; **WESTCHESTER FIRE INSURANCE COMPANY** on December 11, 2006; and **ACE AMERICAN INSURANCE COMPANY** on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
- (2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
- (3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

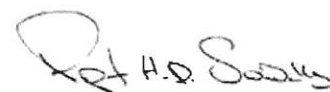
FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, **Rupert HD Swindells**, Assistant Secretary of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
- (ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this **October 23, 2024**




Rupert HD Swindells, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:

Telephone (908) 903-3493

Fax (908) 903-3656

e-mail: surety@chubb.com

SECTION 00 45 14

**PUBLIC CONTRACT CODE CERTIFICATIONS
(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID)**

- 1.1 The undersigned (authorized official signing for the bidder) hereby declares under penalty of perjury the following: 1 In accordance with section 6109 of the Public Contract Code, the Bidder certifies that neither the Bidder nor any subcontractor included on the list of proposed subcontractors submitted with the Bid is ineligible to perform work on public works projects pursuant to Labor Code sections 1777.1 or 1777.7. Contractors and subcontractors who are ineligible to perform work on public works projects pursuant to Labor Code sections 1777.1 or 1777.7 may neither bid on, be awarded or perform as a subcontractor on public works projects. The bidder declares that bidder will not enter into any contract with a subcontractor who/which has been debarred pursuant to section 1771 .1 or section 1777 .7 of the Labor Code. No public monies shall be paid to a debarred subcontractor, and any contract entered into for public work between a prime contractor and debarred subcontractor shall be considered void as a matter of law. Any payments made to a debarred subcontractor shall be returned to the County. The prime contractor shall be solely responsible for all payments to a debarred subcontractor. In no case shall any public money be used to pay a debarred subcontractor.
- 1.2 In accordance with section 10162 of the Public Contract Code, has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?
YES _____ NO X _____
If the answer is yes, explain the circumstances in the following space (use additional sheets if necessary).
- 1.3 In accordance with section 10232 of the Public Contract Code, has more than one final, unappealable finding of contempt of court by a federal court has been issued against the bidder within the immediately preceding two-year period because of the bidder's failure to comply with an order of a federal court which orders the bidder to comply with an order of the National Labor Relations Board? For purposes of this section, a finding of contempt does not include any finding which has been vacated, dismissed, or otherwise removed by the court because the contractor has complied with the order which was the basis for the finding.
YES _____ NO X _____
- 1.4 In accordance with section 10285.1 of the Public Contract Code, the bidder declares that neither the bidder nor any subcontractor to be engaged by the bidder has been convicted of any of the offenses referred to in this section within the preceding three years. These offences include if that bidder or any subcontractor to be engaged by the bidder, or any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, has been convicted by a court of competent jurisdiction of any charge of fraud, bribery, false claims, collusion, conspiracy, or any other act in violation of any state or federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Section 1101, with any state or federal public entity, as defined in Section 1100.

By my signature I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements are true and correct, and that this declaration is executed on this 12th day of November, 2024, Santa Rosa _____, California _____.

Bidder's Signature: 
Mark Davis, President

END OF SECTION 00 45 14

BID RFI #38

SECTION 00 45 13

PART 1 -

NONCOLLUSION AFFIDAVIT


**NONCOLLUSION AFFIDAVIT
(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH
BID)**

The undersigned declares that he or she is the _____ President _____ of

____ Wright Contracting LLC _____, the party making the foregoing bid. The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the Bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, Bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on the _ 12 _ day _ November _, 2024 at _ Santa Rosa _____, California.



_ Mark Davis

_ President

_ Wright Contracting LLC

LIST OF SUBCONTRACTORS

The bidder certifies that:

A. ☐ I do not intend to subcontract any work on this project.

B. ☒ I do intend to subcontract portions of the work on this project.

NOTE: The bidder shall check box A or box B. If the bidder does not check a box, it will be deemed that he has checked box A.

If awarded the Contract, the bidder proposes to employ the following subcontractors who will perform work or labor or render service, to the bidder in or about the work in an amount in excess of one-half of one percent (0.5%) of the total amount of bidder's proposal or \$10,000, whichever is greater. Listing of subcontractors is mandatory under Sections 4100-4108 of the Public Contract Code. If no subcontract work is proposed, except within the one-half of one percent (0.5%) or \$10,000 limit set forth, the bidder shall so state.

Name of Sub Contractor	Address of Sub Contractor	Subcontractor License No.	Subcontractor DIR No.	Phone #	Description of work that Subcontractor will provide
Janus Corporation	1081 Shary Circle Concord, CA 94518	572682	1000000894	(925) 969-9200	DEMOLITION
Don Build	9801 Adam Don Pkwy Santa Rosa, CA 95401	973558	1000018994	(707) 570-1200	Walk In Coolers
Northwest General Engineering	5492 Old Redwood Hwy Santa Rosa, CA 95406	781913	1000941996	(707) 579-1163	SITE WORK
Acumen Construction	18661 McCoy Avenue Saratoga, CA 95070	701228	1000049278	(408) 903-9302	CONCRETE

DESIGNATED SUBCONTRACTOR LIST

00 43 36 - 1/1

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Name of Sub Contractor	Address of Sub Contractor	Subcontractor License No.	Subcontractor DIR No.	Phone #	Description of work that Subcontractor will provide
Townsend + Schmidt	PO Box 1270 Olivehurst, CA 95961	186559	1000000879	(530) 415-7166	MASONRY
SR Iron	PO Box 1086 Healdsburg, CA 95448	576171	1000060474	(707) 473-9740	METALS

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Fremont Millwork Co.	2949 Onyx Ave., Klamath Falls, OR 97603	249756	1000000246	(541) 884-5554	CASEWORK
Solano County Roofing, Inc.	4349 Cordelia Rd Fairfield, CA 94534	495355	1000000777	(707) 864-6000	ROOFING

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Sonoma Drywall and Insulation, Inc.	1009 Link Lane Santa Rosa, CA 95401	1052169	1000654460	(707) 494-8035	DRYWALL
					PLASTERING
American Window & Door Systems, Inc.	1729 Action Ave., Napa, CA 94559	1066478	1000853023	(707) 258-0880	Doors, Frames, Hardware and Windows
Stockham Construction	475 Portal Street E Cotati, CA 94931	633772	1000006109	(707) 664-0945	ACOUSTICAL CEILINGS and Acoustical Wall Panels

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Capital Commercial Flooring, Inc.	3709 Bradview Dr. Sacramento, CA 95827	446458	1000002274	(916) 569-1960	FLOOR COVERINGS and Tile
KBI Painting Contractors	PO Box 750397 Petaluma, CA 94975	944475	1000005867	(707) 795-4955	PAINTING
TK Elevator Corporation	14400 Catalina Street San Leandro, CA 94577	651371	1000002104	(510) 755-0248	ELEVATORS

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Westside Mechanical Inc.	PO Box 0367 Cotati, CA 94931	773449	1000832050	(707) 795-9606	FIRE SPRINKLERS
Calidad Plumbing, Inc.	9477 Greenback Ln., Ste 513, Folsom, CA 95630	840323	1000006317	(916) 987-0800	PLUMBING
Dynamic Mechanical	3487 Orange Grove Ave Ste. K, North Highlands, CA 95660	960877	2000000439	(916) 606-3944	HVAC

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Blakeslee Electric, Inc.	14 West 3rd Street Santa Rosa, CA 95402	416488	1000009340	(707) 545-6393	ELECTRICAL
Jacobson Fence	PO Box 6025 Santa Rosa, CA 95406	515709	1000024902	(707) 544-8475	CL and Decorative Fencing
Systems and Space, Inc.	PO Box 1736 Pleasanton, CA	599899	1000007450	(925) 426-1955	STORAGE/EVIDENCE LOCKERS AND HD MOBILE SYSTEMS

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