

CITY OF BERKELEY

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECTS



PROJECT MANUAL

Fire Station No. 6 Remodel

SPECIFICATION NO. 26-11760-C

October 2, 2025

ADVERTISEMENT DATE: Thursday, November 6, 2025

PRE-BID CONFERENCE: Wednesday November 12, 2025

BID OPENING DATE: Thursday, December 4, 2025

Approved by:

Signed by:

A handwritten signature in blue ink, appearing to read "Ronald A. Nevels", written over a horizontal line.

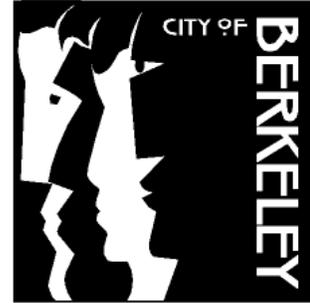
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Ronald A. Nevels
City Engineer

Document 00 0101

CITY OF BERKELEY

DEPARTMENT OF PUBLIC WORKS



PROJECT MANUAL

Fire Station No. 6 Remodel

at

999 Cedar Street, Berkeley, CA 94710
Berkeley, CA 94710

SPECIFICATION NO. 26-11760-C
October 2, 2025

Prepared By:

Signed by:

Priya Chopra

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Priya Chopra, Associate Civil Engineer

Reviewed By:

Signed by:

[Signature]

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Titus Chen for Elmar Kapfer, Supervising Civil Engineer

ENGINEERING DIVISION
1947 CENTER STREET, 4TH FLOOR
BERKELEY, CALIFORNIA 94704

Project Manager
Priya Chopra, Associate Civil Engineer
Phone: (510) 981-6338
Email: pchopra@berkeleyca.gov

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END OF DOCUMENT

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DOCUMENT 00 1113**NOTICE INVITING BIDS****ARTICLE 1 - INVITATION TO BID**

- 1.01 Notice Inviting Bids:** City of Berkeley ("City") will receive sealed Bids at City of Berkeley, Purchasing Manager's Office, located at the Martin Luther King Jr. Civic Center, 2180 Milvia Street, Third Floor, Berkeley, CA 94704, Telephone (510) 981-7320, until **2:00 PM, Thursday, December 4, 2025** for the following public work:

**SPECIFICATION NO. 26-11760-C
CITY OF BERKELEY
Fire Station No. 6 Remodel
999 Cedar Street, Berkeley, CA 94710**

- 1.02 Project Description:** Window replacements, door refurbishment, accessibility improvements to exterior entrance including vertical platform lift, concrete landing and stairs, automatic door actuator and hardware, repair of existing finishes, landscaping, including ancillary work in accordance with the terms and conditions of the Contract Documents. Work shall be completed within **84** Calendar Days from the date when Contract Time commences to run.
- 1.03 Procurement of Bidding Documents:**
Bidding Documents contain the full description of the Work. Bidders may obtain Bidding Documents by Thursday, November 6, 2025 from City of Berkeley's Public Works website under Current Construction Project Bid Opportunities:
**[http://www.cityofberkeley.info/Public_Works/Bids -
Contracts/Current Construction Project Bid Opportunities.aspx#ConstructionProjects](http://www.cityofberkeley.info/Public_Works/Bids_-_Contracts/Current_Construction_Project_Bid_Opportunities.aspx#ConstructionProjects)**
For information pertaining to the Bidding Documents, please contact the Project Manager, Priya Chopra, 1947 Center Street, 4th Floor, Berkeley, CA 94704, by Email at pchopra@berkeleyca.gov or by Telephone at (510) 981-6338 or by FAX **(510) 981-6390**.
- 1.04 Planholders List:**
Bidders are responsible for notifying Priya Chopra, via email at pchopra@berkeleyca.gov to be included on the Planholders List. Please include the following in the email subject header: "Planholders list for Specification No. 26-11760-C for Fire Station No. 6 Remodel". In the body of the email, please state the Name of the Company Representative, Company Name, Address, Telephone Number, Fax Number, and Email Address.
- 1.05 Instructions:** Bidders shall refer to Document 00 2113 (Instructions to Bidders) for required documents and items to be submitted in a sealed envelope for deposit into the Bid Box, located at **City of Berkeley, Purchasing Manager's Office, Martin Luther King Jr. Civic Center, 2180 Milvia Street, Third Floor, Berkeley, CA 94704, Telephone (510) 981-7320** no later than the time and date set forth in Paragraph 1.01 above.
- 1.06 Non-Mandatory Pre-Bid Site Visit:** City will conduct a Non-Mandatory Pre-Bid Conference and Site Visit at 999 Cedar Street, Berkeley, CA 94710. The location of work is not open to the public during normal business or daylight hours. It is recommended that potential bidders visit the site independently to review site conditions prior to bid. City will conduct a Pre-Bid Conference and Site Visit at 999 Cedar Street, Berkeley, CA 94710, at 11:00 AM Wednesday, November 12, 2025
- 1.07 Bid Preparation Cost:** Bidders are solely responsible for the cost of preparing their Bids.

- 1.08 Reservation of Rights:** City specifically reserves the right, in its sole discretion, to reject any or all Bids, to re-bid, or to waive inconsequential defects in bidding not involving time, price or quality of the work. City may reject any and all Bids and waive any minor irregularities in the Bids.

ARTICLE 2 - LEGAL REQUIREMENTS

- 2.01 Required Contractor's License(s):** A California "B" contractor's license is required to bid this contract. Joint ventures must secure a joint venture license prior to award of this Contract. Specialty work may require a specialty contractor's license, held by Bidder or a listed subcontractor.
- 2.02 Bid Alternates:** Bid alternates are identified in Document 00 4113 (Bid Form). The determination of lowest bid shall be based upon: Base contract bid price only.
- 2.03 Substitution of Securities:** City will permit the successful bidder to substitute securities for any retention monies withheld to ensure performance of the contract, as set forth in Document 00 6290 Escrow Agreement For Security Deposits In Lieu Of Retention and incorporated herein in full by this reference, in accordance with Section 22300 of the California Public Contract Code.
- 2.04 Prevailing Wage Laws:** The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents. 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 on file at <http://www.dir.ca.gov/oprl/pwd/> and are deemed included in the Bidding Documents. The successful Bidder shall post the applicable prevailing wage rates at the Site.
- 2.05 Community Workforce Agreement:** This contract **WILL NOT** be subject to the Community Workforce Agreement approved by the Berkeley City Council on June 23, 2015 (See Document 00 6580 – City of Berkeley Contracting Policies). The successful bidder and all subcontractors, at any tier, **WILL NOT** be required to sign an Agreement to be Bound as a condition precedent to entering into any contract for this project.
- 2.06 First Source Construction Agreement:** This contract WILL be subject to the First Source Construction Agreement (See Document 00 6580 – City of Berkeley Contracting Policies).
- 2.07** This contract **WILL NOT** be subject to Supplementary Conditions for Federal Funding. Section 00 7201.

END OF SECTION

DOCUMENT 00 2113**INSTRUCTIONS TO BIDDERS**

Bids are requested by City of Berkeley ("City"), for a general construction contract, or work described in general, as set forth in Document 00 1113 (Notice Inviting Bids), and the following additional terms.

ARTICLE 1 - PROCEDURES FOR SUBMISSION OF BIDS**1.01 Required Pre-Bid Conference and Site Visit**

- A. City **WILL** conduct a Non-Mandatory Pre-Bid Conference and Site Visit at 999 Cedar Street, Berkeley, CA 94710, at 11:00 AM Wednesday, November 12, 2025. The location of work is open to the public during normal business or daylight hours. It is recommended that potential bidders visit the site independently to review site conditions prior to bid.
- B. Questions regarding the site and the Bid Documents may be sent to the City's Representative to clarify such matters as Bidders may request. The Site Visit may be the Bidders' only opportunity to investigate conditions at the Site. Other Pre-Bid Site Visits may be scheduled at City's sole discretion, depending on staff availability.
- C. City will issue Minutes of the Pre-Bid Conference, which shall constitute the sole and exclusive record and statement of the results of the Pre-Bid Conference. The Minutes issued by City are not Contract Documents.

1.02 Required Pre-Bid Investigations

- A. Prior to submission of Bid, Bidder must conduct a careful examination of Bidding Documents and understand the nature, extent, and location of Work to be performed. Refer to Document 00 7200 (General Conditions) on required pre-bid investigations.
- B. Bidders may examine any available existing conditions information (e.g., record documents, specifications, studies, drawings of previous work), as well as applicable environmental assessment information (if any) regarding the Project, which will be posted on the website location indicated in Document 00 1113 (Notice Inviting Bids), paragraph 1.03.

1.03 Bidder Questions and Answers

- A. Bidders must direct all questions about the meaning or intent of Bidding Documents to City's Project Manager in writing as indicated in Document 00 1113 (Notice Inviting Bids), paragraph 1.03. Interpretations or clarifications considered necessary by City in response to such questions will be issued by written Addenda posted to the City's website.
- B. Questions received less than ten (10) calendar days prior to the date for opening Bids may not be answered.
- C. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect, and Bidders shall not rely on oral statements.

1.04 Addenda

- A. Addenda may also be issued to modify the Bidding Documents as deemed advisable by City. Addenda shall be acknowledged by number in Document 00 4113 (Bid Form) and shall be part of the Contract Documents. A complete listing of Addenda may be secured from City on the website as indicated in Document 00 1113 (Notice Inviting Bid), paragraph 1.03.
 - 1. It is the Contractor's responsibility to check the City's website for Addenda prior to submitting their bid.

ARTICLE 2 - RECEIPT OF BIDS**2.01** Date and Time

- A. Sealed Bids will be received by the City until the date and time indicated in Document 00 1113 (Notice Inviting Bids). All Bid envelopes will be time-stamped to reflect their submittal time. City shall reject all Bids received after the specified time and will return such Bids to Bidders unopened. Bidders must submit Bids in accordance with this Document 00 2113.

2.02 Two Envelope Bid Submission:

- A. City will receive Bids in opaque sealed 10 inch x 13 inch envelopes, containing the required items described herein.
- B. Bidders must submit Bids in two envelopes: "Envelope A – Bid Submittals" and "Envelope B – Statement of Qualifications."
- C. Bidders should mark their Bid envelopes using the name, address, identifying information and specification number, indicated in Document 00 1113 (Notice Inviting Bids).

2.03 Required Contents of "Envelope A – Bid Submittals"

- A. Document 00 4113 (Bid Form). Bidders must submit Bids on Document 00 4113 (Bid Form) in accordance with the provisions of Document 00 4113. Bidders must complete all Bid items and supply all information required by Bid documents and specifications.
- B. Document 00 4313 (Bond Accompanying Bid). Bidders must submit Document 00 4313 (Bond Accompanying Bid) accompanied by a cashier's check, certified check (certified without qualification and drawn on a solvent bank of the State of California or a National Bank doing business in the State of California) or completed form of Document 00 4313 of not less than 10% of the base Bid, payable to City and completed in accordance with the provisions of Document 00 4313.
- C. Document 00 4314 (Bidder Registration and Experience Form). Bidders must submit Document 00 4314 (Bidder Registration and Experience Form), completed in accordance with the provisions of Document 00 4314.
- D. Document 00 4330 (Subcontractor List). Bidders must submit Document 00 4330 (Subcontractors List) completed in accordance with the provisions of Document 00 4330. The Subcontractors List must include the names of all subcontractors 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 the total Bid amount. Any violation of this requirement may result in a Bid being deemed non-responsive and not being considered.
- E. Document 00 4519 (Non-Collusion Affidavit). Bidders must submit Document 00 4519 (Non-Collusion Affidavit) completed in accordance with the provisions of Document 00 4519.
- F. Document 00 4546 (Bidder Certifications). Bidders must submit Document 00 4546 (Bidder Certification) completed in accordance with the provisions of Document 00 4546.

2.04 Required Contents of "Envelope B – Statement of Qualifications"

- A. Document 00 4513 (Statement of Qualifications for Construction Work). Bidder must submit Document 00 4513 (Statement of Qualifications for Construction Work) in accordance with the provisions of Document 00 4513.

ARTICLE 3 - BID OPENING AND EVALUATION**3.01** Determination of Apparent Low Bidder

- A. City will open each Bidders' Envelope A at the time and place indicated in Document 00 1113 (Notice Inviting Bids), initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein.

- B. Apparent Low Bid will be determined solely on the total amount of all Bid items based on terms contained in Document 00 1113 (Notice Inviting Bids) and Document 00 4113 (Bid Form). All Bidders are required to submit Bids on all Bid items (including any alternates).
- C. For the purposes of award, the apparent low Bidder will be the conforming responsible Bidder offering the lowest total amount for the Total Base Bid shown in the Bid Form. Once the low bidder is determined as herein described, the City reserves the right to award any combination of Additive Bid alternates, or not award any Additive Bid alternates, as it deems to be in the best interest of the City, regardless of whether the total bid of the particular combination selected is higher or lower than any other bidder for that same combination.
- D. For the Apparent Low Bidder only, City will open Envelope B and evaluate the Apparent Low Bidder for responsiveness to the requirements of Document 00 4513 and for Responsibility.
- E. If Apparent Low Bidder is determined to be non-responsive or non-responsible, then City may proceed to the next Apparent Low Bidder's Bid pursuant to any procedures determined in its reasonable discretion, and proceed for all purposes as if this Apparent Low Bidder were the original Apparent Low Bidder.

3.02 Evaluation of Bids

- A. Bids must be full, complete, clearly written and using the required forms. Bidders shall make any change in the Bid by crossing out the original entry, entering and initialing the new entry. Bidder's failure to submit all required documents strictly as required entitles City to reject the Bid as non-responsive. All Bidders must submit Bids containing each of the fully executed documents supplied in this Project Manual.
- B. In evaluating Bids, City will consider Bidders' qualifications, whether or not the Bids comply with the prescribed requirements, unit prices, and other data, as may be requested in Document 00 4113 (Bid Form) or prior to the Notice of Award.
- C. City may conduct reasonable investigations and reference checks of Bidder and other persons and organizations as City deems necessary to assist in the evaluation of any Bid and to establish Bidder's responsibility, qualifications, financial ability and ability to perform the Work in accordance with the Contract Documents to City's satisfaction within the prescribed time. Submission of a Bid constitutes Bidder's consent to the foregoing.
- D. City shall have the right to consider information provided by sources other than Bidder. City shall also have the right to communicate directly with Bidder's surety regarding Bidder's bonds.
- E. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between written words and figures will be resolved in favor of the words.
- F. Bids shall be deemed to include the written responses of the Bidder to any questions or requests for information of City made as part of Bid evaluation process after submission of Bid.

3.03 Reservation of Rights

- A. City reserves the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder as non-responsive as a result of any error or omission in the Bid, or if City believes that it would not be in the best interest of Project 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 City. For purposes of this paragraph, an "unbalanced Bid" is one having nominal prices for some Bid items and enhanced prices for other Bid items.
- B. City may retain Bid securities and Bid bonds of other than the Apparent Low Bidder for a period of 90 Days after award or full execution of the Contract, whichever first occurs.
- C. City may reject any or all Bids and waive any informalities or minor irregularities in the Bids. City also reserves the right, in its discretion, to reject any or all Bids and to re-Bid the Project.

ARTICLE 4 - MANDATORY BID PROTEST PROCEDURES**4.01 Submission of Written Bid Protest**

- A. Any Bid protest in connection with the construction contract or work described in general in Document 00 1113 (Notice Inviting Bids) must be submitted in writing to the Project Manager as indicated in Document 00 1113, paragraph 1.03 before 3:30 p.m. of the fifth Business Day following opening of the Bidders' envelopes.
- B. The initial protest document must contain a complete statement of the basis for the protest.
- C. The protest must refer to the specific portion of the document that forms the basis for the protest.
- D. The protest must include the name, address, and telephone number of the person representing the protesting party.
- E. Only Bidders who the City otherwise determines are responsive and responsible are eligible to protest a Bid; protests from any other Bidder will not be considered. In order to determine whether a protesting Bidder is responsive and responsible, City may evaluate all information contained in any protesting Bidder's Bid, and conduct the same investigation and evaluation as City is entitled to take regarding an Apparent Low Bidder.
- F. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

4.02 Exclusive Remedy

- A. The procedure and time limits set forth in this paragraph are mandatory and are Bidder's sole and exclusive remedy in the event of Bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.

ARTICLE 5 - AWARD AND EXECUTION OF CONTRACT**5.01 Notice of Intent to Award and Submittal of Executed Contract Documents**

- A. If Contract is to be awarded, it will be awarded to the lowest responsible responsive Bidder. City will issue Document 00 5100 Notice of Intent to Award. Such Award, if made, will be made within sixty (60) calendar days after the opening of the Bid Proposals.
- B. Successful Bidder must execute and submit to City the "Required Contract Documents and Proof of Insurance" set forth below, by 5:00 p.m. of the 10th calendar Day following the Notice of Intent to Award.

5.02 Required Contract Documents and Proof of Insurance

- A. Document 00 5200 (Agreement), fully executed by successful Bidder. Submit **two** originals and an emailed PDF, each bearing an original signature (in blue ink) and initials on each page.
- B. Document 00 6113.13 (Construction Performance Bond), fully executed by successful Bidder and surety, in the amount set forth in Document 00 6113.13. Submit **two** originals and an emailed PDF.
- C. Document 00 6113.16 (Construction Labor and Material Payment Bond), fully executed by successful Bidder and surety, in the amount set forth in Document 00 6113.16. Submit **two** originals and an emailed PDF.
- D. Document 00 6536 (Guaranty), fully executed by successful Bidder. Submit **two** originals and an emailed PDF.
- E. Insurance certificates and endorsements required by Document 00 7316 (Supplementary Conditions — Insurance and Indemnification): Submit **one** original set and an emailed PDF.
- F. Document 006580 (City Contracting Policies), fully executed by successful bidder. Submit **one** original set and an emailed PDF.

5.03 Failure to Execute and Deliver Documents:

- A. If Bidder to whom Contract is awarded, within the period described in this Document 00 2113, fails or neglects to execute and deliver all required Contract Documents and file all required bonds, insurance certificates, and other documents, City may, in its sole discretion, rescind the award, recover on Bidder's surety bond, or deposit Bidder's cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for Bidder's failure to enter into the Contract Documents. Bidder agrees that calculating the damages City may suffer as a result of Bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of Bidder's required Bid security shall be the agreed and presumed amount of City's damages.
- B. Upon such failure to timely deliver all required Contract Documents as set forth herein, City may determine the next Apparent Low Bidder and proceed accordingly. Such Award, if made, will be made within sixty (60) calendar days after the opening of the Bid Proposals.

ARTICLE 6 - GENERAL CONDITIONS AND REQUIREMENTS**6.01 Modification of Commencement of Work:**

- A. City expressly reserves the right to modify the date for the Commencement of Work under the Contract and to independently perform and complete work related to Project. City accepts no responsibility to Contractor for any delays attributed to its need to complete independent work at the Site.
- B. City shall have the right to communicate directly with Apparent Low Bidder's proposed performance bond surety, to confirm the performance bond. City may elect to extend the time to receive faithful performance and labor and material payment bonds.

6.02 Conformed Project Manual:

- A. Following Award of Contract, City may prepare a conformed Project Manual reflecting Addenda issued during bidding, which will, failing objection, constitute the approved Project Manual.

6.03 Payment Bond:

- A. If the Project described in Document 00 1113 (Notice Inviting Bids) involves an expenditure in excess of twenty-five thousand dollars (\$25,000), the successful Bidder must file a payment bond with and approved by City prior to entering upon the performance of the Work, in accordance with Civil Code § 3247.

6.04 Wage Rates:

- A. The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents. 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 on file at <http://www.dir.ca.gov/oprl/pwd/> and are deemed included in the Bidding Documents. The successful Bidder shall post the applicable prevailing wage rates at the Site.

6.05 Withdrawal of Bids:

- A. Bidders may withdraw their Bids at any time prior to the Bid opening time fixed in this Document 00 2113, only by written request for the withdrawal of Bid filed with City's Purchasing Department, at 2180 Milvia Street, 3rd Floor, Berkeley, CA 94704. Bidder or its duly authorized representative shall execute request to withdraw Bid.

6.06 Ineligible Contractors and Subcontractors:

- A. No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

- B. City shall not accept a Bid from a Bidder who is ineligible to bid or work on, or be awarded, a public works project pursuant to California Labor Code section 1777.1 or 1777.7. Bidders and the Contractor who is awarded the project contract shall not utilize, or allow work by, any subcontractor who is ineligible to bid or work on, or be awarded, a public works project pursuant to California Labor Code Section 1777.1 or 1777.7. (See California Public Contract Code Section 6109.) The California Division of Labor Standards Enforcement publishes a list of debarred contractors and subcontractors on the Internet at www.dir.ca.gov/DLSE/debar.html.

6.07 Substitutions:

- A. Bidders must base their Bids on products and systems specified in Contract Documents or listed by name in Addenda. City will consider substitution requests only for "or equal items." Bidders wanting to use "or equal" item(s) may submit Document 00 6325 (Substitution Request Form) no later than 35 calendar days after Notice of Award. As a limitation on Bidder's privilege to request substitution of "or equal" items, City has found that certain items are designated as City standards and certain items are designated to match existing items in use on a particular public improvement either completed or in the course of completion or are available from one source. As to such items, City will not permit substitution. Such items are described in the Bidding Documents.

6.08 Definitions:

- A. All abbreviations and definitions of terms used in this Document 00 2113 are set forth in Document 00 7200 (General Conditions) and Section 01 4200 (References and Definitions).

END OF SECTION

DOCUMENT 00 3132**GEOTECHNICAL DATA AND EXISTING CONDITIONS****ARTICLE 1 - REPORTS AND INFORMATION ON EXISTING CONDITIONS****1.01 Inspection of Reports:**

- A. City, its consultants, and prior contractors may have collected documents providing a general description of the Site and conditions of the Work. These documents may consist of geotechnical reports for and around the Site, contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, and information regarding Underground Facilities (collectively, "Existing Conditions Data".)
- B. Bidders may inspect Geotechnical and Existing Conditions Data. These documents are listed in Section 01 1100 (Summary) and are available for review at the address identified therein. Copies may be obtained for the cost of reproduction and handling upon Bidder's payment for the costs.
- C. Existing Conditions Data is for information only and does not describe labor, materials or equipment furnished by Contractor, but rather, information regarding conditions of the work. Such Existing Conditions Data is not a Contract Document.

ARTICLE 2 - USE OF EXISTING CONDITIONS DATA**2.01 Above-Ground Existing Conditions:**

- A. City makes no warranty or representation of existing aboveground conditions, as-built conditions, or other aboveground actual conditions verifiable by reasonable independent investigation. These conditions are verifiable by Bidder by the performance of its own independent investigation that Bidder must perform prior to bidding and Bidder must not rely on the information supplied by City regarding existing conditions.
- B. Bidder represents and agrees that in submitting its Bid, it is not relying on any information regarding above-ground existing conditions supplied by City.

2.02 Underground Facilities:

- A. Information supplied regarding existing Underground Facilities at or contiguous to the Site is based on information furnished to City by others (e.g., the builders of such Underground Facilities or others).
- B. City assumes responsibility for only the general accuracy, completeness or thoroughness of information regarding Underground Facilities that are owned by City. This express assumption of responsibility applies only if Bidder has conducted the independent investigation required of it under Document 00 7200 (General Conditions) and discrepancies were not apparent. Bidder is solely responsible for any interpretation or conclusion drawn from this information.
- C. City is not responsible for information regarding Underground Facilities owned by others.

2.03 Hazardous Materials Surveys:

- A. Bidders may rely on this data and information for general accuracy regarding the locations of potentially hazardous materials subject of the Work. City does not warrant and makes no representation regarding the completeness or thoroughness of any data or information regarding existing conditions or hazardous materials, including, but not limited to, quantities, characteristics, volumes, or associated structural features. Bidder represents and agrees that in submitting a Bid it is not relying on any such data, information or deductions.
- B. Data and information regarding the locations of hazardous materials are not part of Contract Documents.

2.04 Geotechnical Data:

- A. Bidder may rely upon the general accuracy of the "technical data" contained in the geotechnical reports and drawings identified above, but only insofar as it relates to subsurface conditions,

provided Bidder has conducted the independent investigation required of it and discrepancies were not apparent.

- B. The term "technical data" shall include actual reported depths, reported quantities, reported soil types, reported soil conditions, and reported material, equipment, or structures that were encountered during subsurface exploration. The term "technical data" does not include, and Bidder may not rely upon, any other data, interpretations, opinions or information shown or indicated in such drawings or reports that otherwise relate to subsurface conditions or described structures. The term "technical data" shall not include the location of Underground Facilities.
- C. Bidder may not rely on the completeness of reports and drawings for the purposes of bidding or construction. Bidder is solely responsible for any interpretation or conclusion drawn from any "technical data" or any other data, interpretations, opinions, or information contained in supplied geotechnical data.
- D. Except as expressly set forth in this Document 00 3132, City does not warrant, and makes no representation regarding, the accuracy or thoroughness of any geotechnical data.
- E. Bidder represents and agrees that in submitting its Bid, it is not relying on any geotechnical data supplied by City, except as specifically set forth herein.

ARTICLE 3 - INVESTIGATIONS

3.01 Required Investigations:

- A. Before submitting a Bid, each Bidder shall be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance or furnishing of Work or which 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 or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of Contract Documents.
- B. Bidders shall advise City in writing during the Bid period of any questions, suppositions, inferences or deductions Bidders may have for City's review and response.
- C. City has provided time in the period prior to bidding for Bidder to perform these investigations.

3.02 Access to Site for Investigations:

- A. During the Pre-Bid Site Visit(s), City will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid. The Bidder may request alternate dates and times to access the site. Such request must be made in writing at least ten (10) calendar days prior to bid. Bidders must fill all holes and clean up and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies. Such investigations may be performed only under the provisions of Document 00 2113 (Instructions to Bidders) and Document 00 7200 (General Conditions) including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such investigation work. Each Bidder shall supply all equipment required to perform any investigations as each Bidder deems necessary. City has the right to limit the number of pieces of machinery operating at one time due to safety concerns.

END OF SECTION

**DOCUMENT 00 4113
BID FORM**

TO CITY OF BERKELEY

THIS BID IS SUBMITTED BY:

(Firm/Company Name)

Re: Fire Station No. 6 Remodel at 999 Cedar Street, Berkeley, CA 94710, Specification No. 26-11760-C

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with City of Berkeley in the form included in the Contract Documents, Document 00 5200 (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Contract Documents, Document 00 1113 (Notice Inviting Bids), and Document 00 2113 (Instructions to Bidders), including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 60 calendar days after the day of Bid opening, unless there is a bid protest, then 90 calendar days after the day of bid opening. Bidder will sign and submit Document 00 5200 (Agreement) and other documents required by Document 002113, paragraph 5.02 (Required Contract Documents and Proof of Insurance) within 20 calendar days after receipt of City's Notice of Intent to Award.
3. In submitting this Bid, Bidder represents that Bidder has examined all of the Contract Documents, performed all necessary Pre-Bid investigations as set forth in Document 00 5200 (Agreement) Article 6 (Contractor's Representation), received the Pre-Bid conference minutes (if any), and received the following Addenda:

Addendum Number	ADDENDUM DATE	Signature of Bidder

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices:

SCHEDULE OF BID PRICES

All Bid items, including lump sums and unit prices, must be filled in completely. Bid items are described in Section 01 1100 (Summary of Work). Quote in figures only, unless words are specifically requested.

ITEM	DESCRIPTION	PRICE (\$)
1	All work of the Contract Documents other than work separately provided for under other bid items, i.e. excluding Bid Items 2-9.	
	Total Bid Price: Bid Item 1	

Total Bid Price: (Bid Items 1)

(Words)

Bid Alternates are to be priced for City consideration. These items will not be used to determine lowest bid on bid opening day.

ITEM	DESCRIPTION	PRICE (\$)
2	Bid Alternate 1: Provide W1, W2, W3, and W4 per sheet A800A.	
3	Bid Alternate 2: Provide W5 and W6 per sheet A800A.	
4	Bid Alternate 3: Provide W7 per sheet A800A.	
5	Bid Alternate 4: Provide W8, W9, W10, W11, and W12 per sheet A800A.	
6	Bid Alternate 5: Provide W13 and W14 per sheet A800A.	
7	Bid Alternate 6: Provide W16 per sheet A800A.	
8	Bid Alternate 7: Provide W17, W18, W19, W20, and W21 per sheet A800A.	
9	Bid Alternate 8: Provide W22 and W23 per sheet A800A.	

5. Subcontractors for work included in all Bid items are listed on Document 00 4330 (Subcontractors List) submitted herewith.
6. The undersigned Bidder understands that City reserves the right to reject this Bid, but that this Bid shall remain open and shall not be withdrawn for a period of sixty (60) calendar days from the date prescribed for its opening.
7. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Intent to Award, is mailed or delivered to the undersigned Bidder within the time described in Paragraph 2 of this Document 00 4113 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Document 00 2113 (Instructions to Bidders) within the times specified therein.
8. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.
9. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in Document 00 2113 (Instructions to Bidders), in the amount of ten percent (10%) of the Total Bid Price and made payable to City of Berkeley.

- 10. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Document 00 7200 (General Conditions) and to complete all Work within the time specified in Document 00 5200 (Agreement).
- 11. The undersigned Bidder agrees that, in accordance with Document 00 7200 (General Conditions), liquidated damages for failure to complete all Work in the Contract within the time specified in Document 00 5200 (Agreement) shall be as set forth in Document 00 5200.
- 12. The names of all persons interested in the foregoing Bid as principals are:

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full.

NAME OF BIDDER: _____

licensed in accordance with an act for the registration of Contractors, and with license number: _____ Expiration: _____.

(Place of Incorporation, if Applicable)	(Principal)
	(Principal)
	(Principal)

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

(Signature of Bidder)

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address: _____

Contractor's Representative(s): _____
 (Name/Title)

 (Name/Title)

(Name/Title)

Officers Authorized to Sign Contracts

(Name/Title)

(Name/Title)

(Name/Title)

Telephone Number(s):

(Area Code) (Number)

(Area Code) (Number)

Fax Number(s):

(Area Code) (Number)

(Area Code) (Number)

Date of Bid:

END OF SECTION

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**DOCUMENT 00 4313
BOND ACCOMPANYING BID**

KNOW ALL BY THESE PRESENTS:

That the undersigned

(Name of Contractor)

as Principal and the undersigned as Surety are held and firmly bound unto City of Berkeley,
as obligee, in the penal sum of _____

(Dollar Amount in Words)

Dollars (\$ _____) lawful money of the United States of America being at least ten
percent (10%) of the aggregate amount of said Principal

_____’s base Bid, for the payment of which,
well and truly to be made, we bind ourselves, our successors, executors, administrators, and assigns,
jointly and severally, firmly by these presents.

WHEREAS, the said Principal is submitting a Bid for

Specification No. 26-11760-C
Fire Station No. 6 Remodel
at 999 Cedar Street, Berkeley, CA 94710.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Bid submitted by the said Principal
be accepted and the Contract be awarded to said Principal and said Principal shall within the required
periods enter into the Contract so awarded and provide the required Construction Performance Bond,
Construction Labor and Material Payment Bond, insurance certificates, Guarantee, and all other
endorsements, forms, and documents required under Document 00 2113 (Instructions to Bidders), then
this obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument this _____
day of _____, 20____.
(Month)

(Corporate Seal)

By _____
Principal

By _____
Surety

(Corporate Seal)

By _____
Attorney in Fact

END OF SECTION

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DOCUMENT 00 4314
BIDDER REGISTRATION FORM
INSTRUCTIONS

In order to register to undertake work for City of Berkeley, Bidder **must**:

- 1) Fill out this registration form completely; do not leave blanks.
- 2) Provide certificates of insurance or a letter evidencing coverage complying with Document 00 4513 (Statement of Qualifications).

INDEPENDENT CONTRACTOR REGISTRATION

Contractor's License # _____

Date: _____ Fed I.D. # _____

Full Corporate Name of Company: _____

Street Address: _____

Mailing Address: _____

Phone: _____ Fax: _____

Name of Principal Contact: _____

Type of Business: _____ Sole Proprietor _____ Partnership
 _____ Non-Profit 501(c)(3) _____ Corporation
 _____ other (please explain: _____)

INSURANCE

Workers' Compensation:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

General Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

Automobile Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

All-risk Course of Construction (if applicable, as required by Document 00 7316 [Supplementary Conditions – Insurance]):

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

Professional Liability (if applicable, as required by Document 00 7316 [Supplementary Conditions – Insurance]):

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

**Pollution Legal Liability Insurance (if applicable, as required by Document 00 7316
[Supplementary Conditions – Insurance]):**

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

**BIDDER CERTIFIES, UNDER PENALTY OF PERJURY, THAT THE FOREGOING
INFORMATION IS CURRENT AND ACCURATE AND AUTHORIZES OWNER, AND ITS AGENTS AND
REPRESENTATIVES TO OBTAIN A CREDIT REPORT AND/OR VERIFY ANY OF THE ABOVE
INFORMATION.**

SIGNATURE

DATE

SAFETY EXPERIENCE

The following statements as to the Bidder's safety experience are submitted with the Bid, as part thereof, and the Bidder guarantees the truthfulness and accuracy of all information.

- 1. List Bidder's interstate Experience Modification Rate for the last three years.

[20_] _____ [20_] _____ [20_] _____

- 2. Use Bidder's last year's Cal/OSHA 300 log to fill in the following number of injuries and illnesses:

- a. Number of lost workday cases _____

- b. Number of medical treatment cases _____

- c. Number of fatalities _____

- 3. Employee hours worked last year _____

- 4. State the name of Bidder's safety engineer/manager: _____

Attach a resume or outline of this individual's safety and health qualifications and experience.

I CERTIFY, UNDER PENALTY OF PERJURY, THAT THE FOREGOING INFORMATION IS CURRENT AND ACCURATE AND I AUTHORIZE OWNER, AND ITS AGENTS AND REPRESENTATIVES TO OBTAIN A CREDIT REPORT AND/OR VERIFY ANY OF THE ABOVE INFORMATION.

BIDDER:

By: _____
Signature

Its: _____
Title

Date _____

END OF SECTION

DOCUMENT 00 4330
SUBCONTRACTORS LIST

Bidder submits the following information as to the subcontractors Bidder intends to employ if awarded the Contract.

Full Name of Subcontractor (Sub.) and Address of Mill or Shop	Sub.'s License No.	Description of Work: Reference to Bid Items	Sub.'s Bid Amount	Sub.'s Depart. Of Industrial Relations No.

(Bidder to attach additional sheets if necessary)

END OF SECTION

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DOCUMENT 00 4513
STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION PROJECTS

ARTICLE 1 – GENERAL INFORMATION**1.01 Minimum Bidder Qualifications.**

- A. Bidders must be duly licensed in accordance with the California Business & Professions Code and have a history of work performance sufficient to meet the requirements of a responsible bidder in the California Public Contract Code Section 1104.
- B. Bidders must have three (3) years experience as a continuously operating entity engaged in the performance of similar work.
- C. Bidders must demonstrate successful experience with type of work of this Project, to include, within the past year, completed two (2) projects of a similar nature and complexity with a contract dollar amount of (i.) at least 75% of the amount of Bidder's Bid or (ii.) 125% of such amount in the aggregate.

1.02 Measurement.

- A. Bidder's compliance with the minimum qualification requirements will be measured by Bidder's experience as an operating entity and also by the experience of the supervisory personnel who will have responsible charge of the various major components of the Work.
- B. If Bidder subcontracts portions of the Work, City, in its determination of whether the minimum qualification requirements have been met, may consider the qualifications of the Subcontractor's supervisory personnel.
- C. The qualifications of the Key Personnel are to be submitted with the Statement of Qualifications ("SOQ"), by providing the information described in this Document 00 4513.

ARTICLE 2 – Required Contents of SOQ Submission**2.01 Transmittal Letter**

- A. The Transmittal Letter shall name the proposed prime contractor, its legal structure (i.e., corporation, partnership, limited partnership, joint venture). If a joint venture or partnership is proposed, Bidder shall identify partner and/or member of the joint venture and their roles and responsibilities.

2.02 Submittals:

- A. Completed Questionnaire. Bidder shall include a completed Statement of Qualification Questionnaire in the form attached to this Document 00 4513 as Attachment "A".
- B. License: Evidence of a valid contractor's license and required licenses of all licensees of persons who are Key Personnel necessary to perform the Work.
- C. Litigation History. Description of litigation history for the past three years, including names of involved parties, nature of dispute, and disposition.

2.03 Additional Submittals:

After bid opening, Contractor maybe required to supply the City with the following submittals upon request.

- A. Resumes of Proposed Key Personnel. Bidder shall provide a resume for each named Key Personnel of Bidder, to include as necessary: Years of experience; Education - degrees, schools and years obtained; Professional Registrations; Fluency in English (Yes/No); At least two client references, including contact names, addresses and telephone numbers, and description of projects of a similar nature worked on in the past five years.
- B. Audited or Reviewed Financial Statements. Include audited or reviewed financial statements for the three most recently completed fiscal years for Bidder and each member of any proposed

consorting or joint venture. Also include audited or reviewed financial statements for the three most recently completed fiscal years for any parent companies) of Bidder and each member of any proposed consortium or joint venture.

- C. Surety Letter re: Capability to Provide Required Performance and Payment Bonds. Bidder shall include a letter from a surety duly licensed to do business in the State of California, having a financial rating from A.M. Best Company of A-, VIII or better, that the surety has agreed to provide Bidder with the required performance and payment bonds in accordance with the requirements set forth in Documents 00 6113.13 (Construction Performance Bond) and 00 6113.16 (Construction Labor and material Payment bond), each in the penal sum of the Contractor's bid when submitted. Owner shall have the right to verify with the surety that the surety, based upon the Bid prices, will issue the required bonds under the conditions stated.
- D. Insurer Letter re: Capability to Provide the Required Insurance. Bidder shall provide a letter from an insurance underwriter, having a financial rating reasonably acceptable to City, confirming that the insurer will provide Bidder the required coverages and amounts specified in the Contract Documents.
- E. Description of Human and Physical Resources. Bidder shall identify, describe, and quantify for itself, the following technical information for the construction work: Description and location of manufacturing facilities, naming products and quantifying production capacity and current demand; Description of field organization(s), naming skills and equipment; Description of safety program quality control procedures, and safety experience.

2.04 Format.

- A. The SOQ shall be clear and concise to enable management-oriented personnel to make a thorough evaluation and arrive at a sound determination as to whether the SOQ meet City's requirement. To this end, the SOQ should be so specific, detailed and complete as to demonstrate clearly and fully that the Bidder has a thorough understanding of and has demonstrated knowledge of the requirements to perform the Work (or applicable portion thereof).
- B. Any explanation requested by a Bidder regarding the meaning or interpretation of this Document 00 4513 must be requested in writing and with sufficient time allowed for a reply to reach Bidder before the submission of its SOQ. Oral explanations or instructions will not be binding. Any information provided to any prospective Bidder concerning this Document 00 4513 will be furnished to all prospective Bidders as an Addendum to the Bidding Documents.

STATEMENT OF QUALIFICATION QUESTIONNAIRE FOLLOWS ON NEXT PAGE

ATTACHMENT "A" – STATEMENT OF QUALIFICATION QUESTIONNAIRE

Bidders shall complete the entire Statement of Qualification Questionnaire and submit it in accordance with Document 00 2113 (Instructions to Bidders) and Document 00 4513 (Statement of Qualifications). Failure to complete the questionnaire or inclusion of any false statement(s) shall be ground for immediate disqualification.

CONTACT INFORMATION

Company Name: _____

Owner of Company: _____

Contact Person: _____

Address: _____

Phone: _____ Fax: _____

PART A: GENERAL INFORMATION

- 1. Does Bidder possess a valid and current California Contractor's license for the work proposed? Yes ___ No ___
- 2. Does Bidder have a minimum of **\$2,000,000** liability insurance coverage? Yes ___ No ___
- 3. Has Bidder's License been revoked at any time in the last five years? Yes ___ No ___
- 4. Has Bidder been "default terminated" by an Owner (other than for convenience), or has a Surety completed a contract for Bidder within the last five years? Yes ___ No ___
- 5. Has Bidder been convicted more than twice for failure to pay prevailing wages in the last three years? Yes ___ No ___
- 6. Will Bidder provide copies of its reviewed or audited financial statements and accompanying notes for the last three years, if requested? Yes ___ No ___

**Bidder may be disqualified if any answer to questions 1, 2, or 6 is No.
 Bidder may be disqualified if any answer to questions 3, 4, or 5 is Yes.**

PART B: SAFETY, PREVAILING WAGE, DISPUTES AND BONDS

(SAFETY)

- 1. Has Cal/OHSA, Federal OSHA, the EPA or any Air Quality Management Owner cited Bidder in the past five years?
 Yes ___ No ___ If yes, attach description of each citation.
- 2. How often does Bidder require documented safety meetings be held for:

Field Supervisor	Weekly _____	Bi-Weekly _____	Monthly _____	Less Than Monthly _____
Employees	Weekly _____	Bi-Weekly _____	Monthly _____	Less Than Monthly _____
New Hires	Weekly _____	Bi-Weekly _____	Monthly _____	Less Than Monthly _____
Subcontractors	Weekly _____	Bi-Weekly _____	Monthly _____	Less Than Monthly _____
- 3. How often does Bidder conduct documented safety inspections?
 Quarterly _____ Semi-annually _____ Annually _____ Other _____

- 4. Does Bidder have home office safety representatives who visit/audit the job site?
 Quarterly _____ Semi-annually _____ Annually _____ Other _____
- 5. What is Bidder's Interstate Experience Modification Rate? _____. (A rating in excess of **[1]** may constitute grounds for disqualification as non-responsible).

(PREVAILING WAGE PROVISIONS)

- 6. Has Bidder been fined, penalized or otherwise found to have violated any prevailing wage or labor code provision? If yes, attach description of each occurrence.
 Yes _____ No _____

(LICENSE PROVISIONS)

- 7. Has Bidder changed names or license numbers in the past 5 years? If so, please state reason for change.
 Yes _____ No _____ Reason: _____

(DISPUTES)

- 8. Has Bidder had any claims, litigation, or disputes ending in mediation or arbitration, or termination for cause associated with any project in the past 5 years? If yes, attach description of each instance including details of total claim amount, settlement amount, and Owner's name and phone number.
 Yes _____ No _____

(BONDING)

- 9. Bonding Capacity – Provide documentation from Bidder's surety identifying the following:
 Name of bonding company/surety: _____
 Name of Surety Agent: _____
 Surety Agent address: _____
 Surety Agent phone number: _____
 Is surety a California-admitted surety? Yes _____ No _____
 Is surety listed in the current edition of the California Department of the Treasury's Listing of approved sureties? Yes _____ No _____
 List surety's A.M. Best Rating: _____
 What is Bidder's total bonding capacity? _____
 What percent does Bidder pay for bonds? _____

PART C: EXPERIENCE OF PRIME CONTRACTOR

The nature of this Project requires prior similar experience for the firm and the Key Personnel assigned. Summarize similar project experience below and provide the detailed project information requested:

Prime Contractor. List three projects of similar size and scope to the Work of the Contract, completed in the past two (2) years, and indicate who were the superintendent, project manager and scheduler.

NOTE: this listing will be used to assess compliance with the stated minimum qualifications in Section 1.01.

Project Name	Construction Cost (\$)	Year Completed	Name of Project Superintendent	Name of Project Manager	Name of Project Scheduler

List Key Personnel that will be assigned to the Work of the current Project and their experience/training with the projects listed above:

Project Manager: _____

Project Superintendent: _____

Project Scheduler: _____

Recent Projects.

Provide information about three (3) of its most currently completed projects. Names and references must be current and verifiable. This listing will be used to assess compliance with the stated minimum qualifications in Section 1.01. If a separate sheet is used, it must contain all of the following information:

1. Project Name: _____
Location: _____
Owner: _____
Owner Contact (name and phone): _____
Architect/Engineer: _____
Architect/Engineer Contact (name and phone number): _____
Const. Mgr. or Project Mgr. (name and phone number): _____
Description of Project, Scope of Work Performed: _____

Total Construction Cost: _____
Total Change Order Amount: _____
Did Change Orders exceed 10% of original contract sum? _____ If yes, please explain on separate sheet.
Original Scheduled Date of Completion: _____
Time Extensions Granted (number of calendar days): _____
Actual Date of Completion: _____
Number of Stop Notices filed by Subcontractors or Suppliers: _____
2. Project Name: _____
Location: _____
Owner: _____
Owner Contact (name and phone): _____
Architect/Engineer: _____
Architect/Engineer Contact (name and phone number): _____
Const. Mgr. or Project Mgr. (name and phone number): _____
Description of Project, Scope of Work Performed: _____

Total Construction Cost: _____

Total Change Order Amount: _____

Did Change Orders exceed 10% of original contract sum? _____ If yes, please explain on separate sheet.

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of calendar days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by Subcontractors or Suppliers: _____

3. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Total Construction Cost: _____

Total Change Order Amount: _____

Did Change Orders exceed 10% of original contract sum? _____ If yes, please explain on separate sheet.

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of calendar days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by Subcontractors or Suppliers: _____

PART D: FINANCIAL INFORMATION

- 1. Has Bidder ever reorganized under the protection of bankruptcy laws?
Yes _____ No _____ If yes, please state when _____
- 2. If Bidder has had the general liability carrier identified in Document 00 4314 (Bidder Registration and Safety Experience Form) for less than 5 years, please provide additional information below for balance of the last 5 years:

Agency Name: _____

Contact Name: _____

Phone Number _____

Carrier: _____ A.M. Best Rating: _____

Carrier: _____ A.M. Best Rating: _____

Carrier: _____ A.M. Best Rating: _____

- 3. Has Bidder ever had insurance terminated by a carrier? Yes _____ No _____
If yes, explain on a separate signed sheet marked with correlating cross-reference to this paragraph of the questionnaire.

Bidder hereby declares under penalty of perjury that all the information provided in this questionnaire is true and correct.

SIGNATURE

TITLE

END OF SECTION

NOTE: If Bidder is a partnership or a joint venture, this affidavit must be signed and sworn to by every member of the partnership or venture.

NOTE: If Bidder [including any partner or venturer of a partnership or joint venture] is a corporation, this affidavit must be signed by the Chairman, President, or Vice President and by the Secretary, Assistant Secretary, Chief Financial Officer, or Assistant Treasurer.

NOTE: If Bidder's affidavit on this form is made outside the State of California, the official position of the person taking such affidavit shall be certified according to law.

END OF SECTION

**DOCUMENT 00 4546
BIDDER CERTIFICATIONS**

TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID

The undersigned Bidder certifies to City as set forth in sections 1 through 5 below.

1. STATEMENT OF CONVICTIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that no more than one final, unappealable finding of contempt of court by a Federal Court has been issued against Bidder within the past two years because of failure to comply with an order of a Federal Court or to comply with an order of the National Labor Relations Board.

2. CERTIFICATION OF WORKER'S COMPENSATION INSURANCE

By my signature hereunder, as the Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's 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.

3. CERTIFICATION OF PREVAILING WAGE RATES AND RECORDS

By my signature hereunder, as the Contractor, I certify that I am aware of the provisions of Section 1773 of the California Labor Code, which requires the payment of prevailing wage on public projects. Also, that the Contractor and any subcontractors under the Contractor shall comply with California Labor Code §1776, regarding wage records, and with California Labor Code §1777.5, regarding the employment and training of apprentices. It is the Contractor's responsibility to ensure compliance by any and all subcontractors performing work under this Contract.

4. CERTIFICATION OF COMPLIANCE WITH PUBLIC WORKS CHAPTER OF LABOR CODE

By my signature hereunder, as the Contractor, I certify that I am aware of Sections 1777.1 and 1777.7 of the California Labor Code and Contractor and Subcontractors and am eligible to bid and work on public works projects.

5. CERTIFICATION OF ADEQUACY OF CONTRACT AMOUNT

By my signature hereunder, as the Contractor, pursuant to Labor Code Section 2810(a), I certify that, if awarded the Contract based on the undersigned's Bid, the Contract will include funds sufficient to allow the Contractor to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided. I understand that Owner will be relying on this certification if it awards the Contract to the undersigned.

BIDDER:

(Name of Bidder)

Date: _____, [20] By: _____
(Signature)

Name: _____
(Print Name)

Its: _____
(Title)

END OF SECTION

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DOCUMENT 00 5100

NOTICE OF INTENT TO AWARD

Dated _____

TO: _____

ADDRESS: _____

CONTRACT NO.: _____

CONTRACT FOR: City of Berkeley
Fire Station No. 6 Remodel AT 999 Cedar Street, Berkeley, CA 94710

The Contract Sum of your contract is X Dollars and X Cents (\$XX.XX).

1. Two copies of the proposed Contract Documents listed below accompany this Notice of Award.
2. You must comply with the following conditions precedent by **5:00 p.m.** of the **20th Day** following the date of this Notice of Award, that is, by Day of Week, Month Day, Year.
 - a. Deliver to Owner **two** fully executed counterparts and an emailed PDF copy of Document 00 5200 (Agreement). Each copy of Document 00 5200 (Agreement) must bear your original signature on the signature page and your initials on each page.
 - b. Deliver to Owner **two** originals and an emailed PDF of Document 00 6113.13 (Construction Performance Bond), executed by you and your surety.
 - c. Deliver to Owner **two** originals and an emailed PDF of Document 00 6113.16 (Construction Labor and Material Payment Bond), executed by you and your surety.
 - d. Deliver to Owner **two** original copies and an emailed PDF of Document 00 6536 (Guaranty), each executed by you.
 - e. Deliver to Owner **one** original set and an emailed PDF of the insurance certificates with endorsements required under Document 00 7316 (Supplementary Conditions – Insurance).
 - f. Deliver to Owner **one** original copy and an emailed PDF of all documents found in Document 00 6580 (City of Berkeley Contracting Policies) executed by you.
3. Failure to comply with these conditions within the time specified will entitle Owner to consider your Bid abandoned, to annul this Notice of Award, and to declare your Bid security forfeited.
4. Within 21 calendar days after you comply with the conditions in Paragraph 2 of this Document 00 5100, Owner will return to you one fully signed counterpart of Document 00 5200 (Agreement) with [number] copies of the Project Manual (including Specifications and Drawings) and [number] sets of full-size Drawings.
5. Before you may start any Work at the Site, you must attend a preconstruction conference. The preconstruction conference may be arranged through **Priya Chopra (510) 981-6338**. Questions regarding

bonds and insurance may be directed to **Priya Chopra** at the same number. All other inquiries regarding the Project should be directed to **Priya Chopra**.

6. Upon commencement of the Work, you and each of your Subcontractors shall certify and provide Owner copies of payroll records on forms provided by the Division of Labor Standards Enforcement, in accordance with California Labor Code §1776.

OWNER

BY: _____
(Title)

(Print Name)

ATTEST: _____
Secretary

(Print Name)

AUTHORIZED BY [CITY / COUNTY / DISTRICT] RESOLUTION:

NO: _____

ADOPTED: _____, [20__]

[Copy of Resolution Attached]

END OF DOCUMENT

DOCUMENT 00 5200**AGREEMENT**

THIS AGREEMENT, dated this [date] day of [Month], [20__], by and between [Contractor Name] whose place of business is located at [Contractor Address] ("Contractor"), and City of Berkeley ("City"), acting under and by virtue of the authority vested in Owner by the laws of the State of California.

SPECIFICATION NUMBER 26-11760-C

**Fire Station No. 6 Remodel
at
999 Cedar Street, Berkeley, CA 94710**

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, Contractor and City agree as follows:

ARTICLE 1 – SCOPE OF WORK OF THE CONTRACT**1.01 WORK OF THE CONTRACT**

- A. Contractor shall complete all Work specified in the Contract Documents, in accordance with the Specifications, Drawings, and all other terms and conditions of the Contract Documents (**Work**).

1.02 PRICE FOR COMPLETION OF THE WORK

- A. City shall pay Contractor the following Contract Sum \$XX.XX for completion of Work in accordance with Contract Documents as follows: [HERE INSERT LUMP SUM, UNIT PRICES, OR CONTRACTOR'S BID IN WORDS AND NUMBERS]
- B. The Contract Sum includes all allowances (if any).

ARTICLE 2 – COMMENCEMENT AND COMPLETION OF WORK**2.01 COMMENCEMENT OF WORK**

- A. Contractor shall commence Work on the date established in the Notice to Proceed (**Commencement Date**).
- B. City reserves the right to modify or alter the Commencement Date.

2.02 COMPLETION OF WORK

- A. Contractor shall achieve Substantial Completion of the entire Work within **84** calendar days from the Commencement Date.
- B. Contractor shall achieve Final Completion of the entire Work **104** calendar days from the Commencement Date.

ARTICLE 3 – PROJECT REPRESENTATIVES**3.01 CITY'S PROJECT MANAGER**

- A. City has designated Priya Chopra as its Project Manager to act as City's Representative in all matters relating to the Contract Documents.
- B. Project Manager shall have final authority over all matters pertaining to the Contract Documents and shall have sole authority to modify the Contract Documents on behalf of City, to accept work, and to make decisions or actions binding on City, and shall have sole signature authority on

behalf of City.

- C. City may assign all or part of the Project Manager’s rights, responsibilities and duties to a Construction Manager, or other City Representative.

3.02 CONTRACTOR’S PROJECT MANAGER

- A. Contractor has designated [_____ or other] as its Project Manager to act as Contractor’s Representative in all matters relating to the Contract Documents.

3.03 ARCHITECT/ENGINEER

- A. **ELS Architects** furnished the Plans and Specifications and shall have the rights assigned to Architect/Engineer in the Contract Documents.
- B. Architect/Engineer has designated **David Masenten** as its project manager, to act as its representative for receiving and making communications authorized under the Contract Documents.

ARTICLE 4 – LIQUIDATED DAMAGES FOR DELAY IN COMPLETION OF WORK

4.01 LIQUIDATED DAMAGE AMOUNTS

- A. As liquidated damages for delay, Contractor shall pay City three thousand six-hundred dollars (\$3,600.00) for each Day that expires after the time specified herein for Contractor to achieve Substantial Completion of the entire Work, until achieved.
- B. As liquidated damages for delay, Contractor shall pay City three thousand six-hundred dollars (\$3,600.00) for each Day that expires after the time specified herein for Contractor to achieve Final Completion of the entire Work, until achieved.

4.02 SCOPE OF LIQUIDATED DAMAGES

- A. Measures of liquidated damages shall apply cumulatively.
- B. Limitations and stipulations regarding liquidated damages are set forth in Document 00 7200 (General Conditions).

ARTICLE 5 – CONTRACT DOCUMENTS

5.01 Contract Documents consist of the following documents, including all changes, Addenda, and Modifications thereto:

Document 00 5100	Notice of Award
Document 00 5200	Agreement
Document 00 5500	Notice to Proceed
Document 00 6113.13	Construction Performance Bond
Document 00 6113.16	Construction Labor and Material Payment Bond
Document 00 6536	Guaranty
Document 00 6530	Release of Claims
Document 00 6325	Substitution Request Form
Document 00 6290	Escrow Agreement for Security Deposits
Document 00 6580	City of Berkeley Contracting Policies
Document 00 7200	General Conditions
Document 00 7201	Supplementary Conditions
Document 00 7316	Supplementary Conditions – Insurance
Document 00 7317	Supplemental Conditions – Contracting Policies
Document 00 7319	Supplemental Conditions – Hazardous Materials
Document 00 7380	Apprenticeship Programs
Document 00 9113	Addenda

Specifications Divisions 1 through 9
Maps, Drawings and Sketches listed in Document 00 0115

- 5.02** There are no Contract Documents other than those listed above. The Contract Documents may only be amended, modified or supplemented as provided in Document 00 7200 (General Conditions).

ARTICLE 6 – CONTRACTOR’S REPRESENTATIONS

In order to induce City to enter into this Agreement, Contractor makes the following representations and warranties:

- 6.01** Contractor 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 which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.
- 6.02** Contractor has examined thoroughly and understood all reports of exploration and tests of subsurface conditions, as-built drawings, drawings or reports, available for Bidding purposes, of physical conditions, including Underground Facilities, identified in the Bid Documents, or which may appear in the Drawings, and accepts the determination set forth in these documents and Document 00 7200 General Conditions of the limited extent of the information contained in such reports and drawings upon which the Contractor may be entitled to rely. Contractor agrees that except for the information so identified, Contractor does not and shall not rely on any other information contained in such reports and drawings.
- 6.03** Contractor has conducted or obtained and has understood all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Article 6.02 above) which pertain to the subsurface conditions, as-built conditions, Underground Facilities and all other physical conditions at or contiguous to the site or otherwise which may affect the cost, progress, performance or furnishing of Work, as Contractor 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 the Contract Documents, including specifically the provisions of the General Conditions; and no additional examinations, investigations, explorations, test, reports, studies or similar information or data are or will be required by Contractor for such purposes.
- 6.04** Contractor 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.
- 6.05** Contractor has given the Project Manager prompt written notice of all conflicts, errors, ambiguities or discrepancies that it has discovered in or among the Contract Documents and as-built and actual conditions and the written resolution thereof through Addenda issued by Project Manager is acceptable to Contractor.

ARTICLE 7 – MISCELLANEOUS

- 7.01** Terms and abbreviations used in this Agreement are defined in Document 00 7200 (General Conditions) and Section 01 4200 (References and Definitions) and will have the meaning indicated therein.
- 7.02** It is understood and agreed that in no instance are the persons signing this Agreement for or on

behalf of City or acting as an employee, agent, or representative of City, liable on this Agreement or any of the Contract Documents, or upon any warranty of authority, or otherwise, and it is further understood and agreed that liability of City is limited and confined to such liability as authorized or imposed by the Contract Documents or applicable law.

- 7.03** In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, Contractor or Subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. §15) or under the Cartwright Act (Chapter 2 (commencing with §16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time City tenders final payment to Contractor, without further acknowledgment by the parties.
- 7.04** 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 deemed included in the Contract Documents and on file at Owner's Office, and shall be made available to any interested party on request. Pursuant to California Labor Code §§ 1860 and 1861, in accordance with the provisions of Section 3700 of the Labor Code, every contractor will be required to secure the payment of compensation to his employees. Contractor represents that it is 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 Contractor shall comply with such provisions before commencing the performance of the Work of the Contract Documents.
- 7.05** 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 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].
- No contractor or subcontractor may be awarded a contract for public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5
- This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- 7.06** This Agreement and the Contract Documents shall be deemed to have been entered into in the County of Alameda, State of California, and governed in all respects by California law (excluding choice of law rules). The exclusive venue for all disputes or litigation hereunder shall be in the Superior Court for the County of Alameda.

IN WITNESS WHEREOF the parties have executed this Agreement in triplicate the day and year first above written.

CITY OF BERKELEY

[CONTRACTOR NAME]

By: _____
City Manager

By: _____
(Signature)

(Print Name)

Its: _____
Title (If Corporation: Chairman, President
or Vice President)

Attest:
CITY OF BERKELEY

City Clerk

By: _____
(Signature)

(Print Name)

Its: _____
Title (If Corporation: Secretary, Assistant
Secretary, Chief Financial Officer or
Assistant Treasurer)

Pre-approved as to form:
CITY ATTORNEY
8/2016

END OF DOCUMENT

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DOCUMENT 00 5500

NOTICE TO PROCEED

Dated: _____, 20__

To: _____
(Contractor)

Address: _____

CONTRACT FOR: **City of Berkeley Fire Station No. 6 Remodel AT 999 Cedar Street, Berkeley, CA 94710**

CONTRACT NO: XXXXXX

You are notified that the Contract Time under the above Contract will commence to run on _____ [20__]. On that date, you are to start performing your obligations with respect to Work at the Site under the Contract Documents. In accordance with Article 2 of Document 00 5200 (Agreement), the dates of Substantial Completion and Final Completion for the entire Work are _____, [20__] and _____, [20__], respectively.

Before you may start any Work at the Site, you must:

1. Submit certified Safety Program and related information
2. Submit copies of applicable permits
3. Submit approved fire protection plan, if applicable
4. [Other]

OWNER

By: _____

Its: _____

END OF DOCUMENT

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DOCUMENT 00 6113.13

CONSTRUCTION PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

1.01 THAT WHEREAS, **City of Berkeley** ("City"), a public agency of the State of California, has awarded to **[Contractor Name]** as Principal, Specification Number **26-11760-C**, dated the _____ day of _____, 20____ (the "Contract"), titled Fire Station No. 6 Remodel in the amount of \$XX.XX, which Contract is by this reference made a part hereof, for the work of the following Contract:

Window repair and replacement, ADA upgrades, and ancillary work.

1.02 AND WHEREAS, Principal is required to furnish a bond in connection with the Contract, guaranteeing the faithful performance thereof;

1.03 NOW, THEREFORE, we, the undersigned Principal and (Name of Surety) _____ as Surety are held and firmly bound unto City in the sum of 100% OF THE CONTRACT PRICE to be paid to City or its successors and assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

1.04 THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its heirs, executors, administrators, successors, or assigns approved by City, shall promptly and faithfully perform the covenants, conditions, and agreements of the Contract during the original term and any extensions thereof as may be granted by City, with or without notice to Surety, and during the period of any guarantees or warranties required under the Contract, and shall also promptly and faithfully perform all the covenants, conditions, and agreements of any alteration of the Contract made as therein provided, notice of which alterations to Surety being hereby waived, on Principal's part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify, defend, protect, and hold harmless City as stipulated in the Contract, then this obligation shall become and be null and void; otherwise it shall be and remain in full force and effect.

1.05 No extension of time, change, alteration, modification, or addition to the Contract, or of the work required thereunder, or work or actions by City to mitigate the damages resulting from any breach in performance by Contractor, shall release or exonerate Surety on this bond or in any way affect the obligation of this bond; and Surety does hereby waive notice of any such extension of time, change, alteration, modification, or addition.

1.06 Whenever Principal shall be and declared by City in default under the Contract, Surety shall promptly remedy the default, or shall promptly, and in no event later than thirty (30) calendar days from notice:

- A. Undertake through its agents or independent contractors (but having qualifications and experience reasonably acceptable to City, to complete the Contract in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including without limitation, all obligations with respect to warranties, guarantees, indemnities, and the payment of liquidated damages; or
- B. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and, upon determination by City of the lowest responsible bidder, arrange for a contract between such bidder and City and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Sum, and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages; but, in

any event, Surety's total obligations hereunder shall not exceed the amount set forth in the third paragraph hereof. The term "balance of the Contract Sum," as used in this paragraph, shall mean the total amount payable by City to the Principal under the Contract and any amendments thereto, less the amount paid by City to Principal.

- 1.07 Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing City's rights against the others.
- 1.08 Surety may not use Contractor to complete the Contract absent City's Consent. City shall have the right in its sole discretion to continue the work of the Contract, as necessary following a default and/or termination, as necessary to prevent risks of personal injury, property damage or delay to the Project.
- 1.09 No right of action shall accrue on this bond to or for the use of any person or corporation other than City or its successors or assigns.
- 1.10 Surety shall join in any proceedings brought under the Contract upon City's demand, and shall be bound by any judgment.
- 1.11 Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this _____ day of _____, 20____.

CONTRACTOR AS PRINCIPAL

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title: _____

Address: _____

Company: _____ (Corp. Seal)

Signature: _____

Name and Title: _____

Address: _____

END OF DOCUMENT

DOCUMENT 00 6113.16**CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS:

1.01 THAT WHEREAS, City of Berkeley ("City") has awarded to [Contractor Name] as Principal, Specification No. **26-11760-C** dated the _____ day of _____, 20____ (the "Contract"), titled Fire Station No. 6 Remodel in the amount of **\$XX.XX**, which Contract is by this reference made a part hereof, for the work of the following Contract:

(Describe Contract Work)

1.02 AND WHEREAS, Principal is required to furnish a bond in connection with the Contract to secure the payment of claims of laborers, mechanics, material suppliers, and other persons as provided by law;

1.03 NOW, THEREFORE, we, the undersigned Principal and (Name of Surety), as Surety, are held and firmly bound unto City in the sum of 100% OF THE CONTRACT PRICE (**\$** _____), for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

1.04 THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its executors, administrators, successors, or assigns approved by City, or its subcontractors shall fail to pay any of the persons named in California Civil Code §3181, or amounts due under the State of California Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the State of California Employment Development Department from the wages of employees of Principal and subcontractors pursuant to Section 13020 of the State of California Unemployment Insurance Code with respect to such work and labor, that Surety will pay for the same in an amount not exceeding the sum specified in this bond, plus reasonable attorneys' fees, otherwise the above obligation shall become and be null and void.

1.05 This bond shall inure to the benefit of any of the persons named in California Civil Code §3181, as to give a right of action to such persons or their assigns in any suit brought upon this bond. The intent of this bond is to comply with the California Mechanic's Lien Law.

1.06 Surety, for value received, hereby expressly agrees that no extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder, shall in any way affect the obligation of this bond; and it does hereby waive notice of any such extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder.

1.07 Surety's obligations hereunder are independent of the obligations of any other surety for the payment of claims of laborers, mechanics, material suppliers, and other persons in connection with Contract; and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing Owner's rights against the other.

1.08 Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this ____ day of _____,
20____.

CONTRACTOR AS PRINCIPAL

SURETY

Company: (Corp. Seal)

Company: (Corp. Seal)

Signature

Signature

Name

Name

Title

Title

Street Address

Street Address

City, State, Zip Code

City, State, Zip Code

END OF DOCUMENT

DOCUMENT 00 6290**ESCROW AGREEMENT FOR SECURITY DEPOSIT IN LIEU OF RETENTION**

California Public Contract Code §22300

THIS ESCROW AGREEMENT ("Escrow Agreement") is made and entered into this ____ day of _____, 20 ____, by and between City of Berkeley ("City"), whose address is 2180 Milvia Street, Berkeley, California 94704, **[Contractor Name]** ("Contractor"), whose place of business is located at **[Contractor Address]** and _____ (**Name**), as escrow agent **OR [] (Name of Bank)** _____, a state or federally chartered bank in the State of California, whose place of business is located at _____ ("Escrow Agent").

For the consideration hereinafter set forth, City, Contractor and Escrow Agent agree as follows:

1. Pursuant to California Public Contract Code §22300, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by City pursuant to Contract Number _____ entered into between City and Contractor for Fire Station No. 6 Remodel located at **999 Cedar Street, Berkeley, CA 94710** in the amount of **\$XX.XX** dated _____, 20 ____ (the "Contract"). Alternatively, on written request of Contractor, City shall make payments of the retention earnings directly to Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, Escrow Agent shall notify City within ten calendar days of the deposit. The market value of the securities at the time of substitution shall be at least equal to the cash amount then required to be withheld as retention under terms of Contract between Owner and Contractor. Securities shall be held in name of _____, and shall designate Contractor as the beneficial owner.
2. City shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to Contract provisions, provided that Escrow Agent holds securities in form and amount specified in Paragraph 1 of this Document 00 6290.
3. When City makes payment(s) of retention earned directly to Escrow Agent, Escrow Agent shall hold said payment(s) for the benefit of Contractor until the time that the escrow created under this Escrow Agreement is terminated. Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when City pays Escrow Agent directly.
4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account, and all expenses of City. Such expenses and payment terms shall be determined by Owner, Contractor, and Escrow Agent.
5. Interest earned on securities or money market accounts held in escrow and all interest earned on that interest shall be for sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to City.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from City to Escrow Agent that City consents to withdrawal of amount sought to be withdrawn by Contractor.
7. City shall have the right to draw upon the securities in event of default by Contractor. Upon seven (7) calendar days written notice to Escrow Agent from City of the default, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by City.
8. Upon receipt of written notification from City certifying that the Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees

and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

- 9. Escrow Agent shall rely on written notifications from City and Contractor pursuant to Paragraphs 5 through 8, inclusive, of this Document 00 6290 and City and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth.
- 10. Names of persons who are authorized to give written notice or to receive written notice on behalf of City and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

ON BEHALF OF CITY:

ON BEHALF OF CONTRACTOR:

Title

Name

Signature

Address

City/State/Zip Code

Title

Name

Signature

Address

City/State/Zip Code

ON BEHALF OF ESCROW AGENT:

Title

Name

Signature

Address

City/State/Zip Code

IN WITNESS WHEREOF, the parties have executed this Escrow Agreement by their proper officers on the date first set forth above.

CITY

CONTRACTOR

Title

Name

Signature

Title

Name

Signature

ATTEST

Signature

Print Name

City Clerk

ESCROW AGENT

Title

Print Name

Signature

Pre-approved as to form:
CITY ATTORNEY
8/2016

At the time the Escrow Account is opened, City and Contractor shall deliver to Escrow Agent a fully executed counterpart of this Document 00 6290.

END OF DOCUMENT

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DOCUMENT 00 6325

SUBSTITUTION REQUEST FORM

To: [_____, Project Manager, City of Berkeley]
 [(____) ____-____]

PROJECT:	Contractor:
City's Specification No. :	

Substitution Request By:	Firm:
--------------------------	-------

Transmittal Record	Attn:	Firm:	Date Sent:	Date Rec'd:	Date Due:
Contractor to City					
Contractor to Architect					
City / Architect to Consultant					
Architect to City Representative					
City Representative to Contractor					

We hereby submit for your consideration the following product instead of the specified item for the Project:

Section / Drawing	Article	Specified Item
Proposed Substitution:		

We have (a) attached manufacturer's literature, including complete technical data and laboratory test results, if applicable, (b) attached an explanation of why proposed substitution is a true equivalent to specified item, (c) included complete information on changes to Contract Documents that the proposed substitution will require for its proper installation, and (d) filled in the blanks below:

Contractor to complete questions that follow and certifies to the accuracy of all answers:

A.	Does the substitution affect dimensions shown on Drawings? Yes ___ / No ___. If No, please explain proposed mitigation and why substitution is equivalent to originally specified item:
B.	Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution? Yes ___ / No ___. If No, please state reasons explain why substitution is equivalent to originally specified item:
C.	What effect does the substitution have on other trades? No effect: ___ / Some effect ___. If substitution will affect other trades, please explain the effect and why substitution is equivalent to originally specified item:
D.	Will substitution cause change to Project Schedule, or to critical delivery dates? Add? Shorten? If the substitution will add to schedule dates or affect critical activities, please explain why substitution is equivalent to originally specified item:
E.	Please describe differences between proposed substitution and specified item? Please explain and identify any and all differences, and please explain why substitution is equivalent to originally specified item:
F.	What is the Cost Differential to Contractor in original specified item and proposed substitution including all mark-ups? [If substitution requested during bid period, skip this question.]
G.	Are Manufacturer's guarantees for the proposed item the same as for item specified? Yes ____; No _____. If No, please explain why substitution is equivalent to originally specified item:

H.	Contractor accepts full responsibility for delays caused by redesign of other items of the Work necessitated by substitution? Yes ___ / No ___. If No, please state reasons and explain why substitution is equivalent to originally specified item:
I.	Contractor states that the function, appearance and quality are equivalent or superior to the specified item? Yes ___ / No ___. If No, please explain why substitution is equivalent to originally specified item:

We certify that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item, except as we may specifically state otherwise in this request.

Submitted by: _____ Signature: _____

Firm: _____ Date: _____

Address: _____ Phone/ Fax: _____

Remarks: _____

Consultant Response:
 Accepted
 Not Accepted
 Accepted As Noted
 Received Too Late

City Representative Response:
 Accepted
 Not Accepted
 Accepted As Noted
 Received Too Late

Remarks: _____

Remarks: _____

By: _____

By: _____

END OF DOCUMENT

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DOCUMENT 00 6530

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

[Public Contract Code § 7100]

THIS AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS (“Agreement and Release”), made and entered into this _____ day of _____, 20____, by and between City of Berkeley (“City”), and **[Contractor Name]**(“Contractor”), whose place of business is at **[Contractor Address]**.

RECITALS

- A. City and Contractor entered into Contract Number **XXXXXX** (the “Contract”) for construction of City **Fire Station No. 6 Remodel** located at **999 Cedar Street, Berkeley, CA 94710**, California.
- B. The Work under the Contract has been completed.

AGREEMENT

NOW THEREFORE, it is mutually agreed between City and Contractor as follows:

- 1. Contractor will not be assessed liquidated damages except as detailed below:

Original Contract Sum	\$ _____
Modified Contract Sum	\$ _____
Payment to Date	\$ _____
Liquidated Damages	\$ _____
Payment Due Contractor	\$ _____

- 2. Subject to the provisions of this Agreement and Release, Owner will forthwith pay to Contractor the sum of [X Dollars and X Cents (\$\$XX.XX)] under the Contract, less any amounts withheld under the Contract or represented by any Notice to Withhold Funds on file with City as of the date of such payment.
- 3. Contractor acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against City arising from the Contract, except for the claims described in Paragraph 4 of this Document 00 6530. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Contractor against City, and all if its agents, employees, consultants, inspectors, representatives, assignees and transferees, except for the Disputed Claims set forth in Paragraph 4 of this Document 00 6530. Nothing in this Agreement and Release shall limit or modify Contractor’s continuing obligations described in Paragraph 6 of this Document 00 6530.
- 4. The following claims submitted under Document 00 7200 (General Conditions), Article 12, are disputed (hereinafter, the “Disputed Claims”) and are specifically excluded from the operation of this Agreement and Release.

[Insert information in Chart below, affix attachment if necessary]

CLAIM NO.	DATE SUBMITTED	DESCRIPTION OF CLAIM	AMOUNT OF CLAIM

5. Consistent with California Public Contract Code §7100, Contractor hereby agrees that, in consideration of the payment set forth in Paragraph 2 of this Document 00 6530, Contractor hereby releases and forever discharges City, and all of its agents, employees, consultants, inspectors, assignees and transferees from any and all liability, claims, demands, actions or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract.
6. Guarantees and warranties for the Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.
7. Contractor shall immediately defend, indemnify and hold harmless City, any of the City's Representatives, Project Manager, and all of their agents, employees, consultants, inspectors, assignees and transferees, from any and all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities that may be asserted against them by any of Contractor's suppliers and/or Subcontractors of any tier and/or any suppliers to them for any and all labor, materials, supplies and equipment used, or contemplated to be used in the performance of the Contract, except for the Disputed Claims set forth in Paragraph 4 of this Document 00 6530.
8. Contractor hereby waives the provisions of California Civil Code §1542, which provide as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER, MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.
9. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable, and if any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal or other law, ruling, or regulation, then such provision, or part thereof shall remain in force and effect only to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.
10. Contractor represents and warrants that it is the true and lawful owner of all claims and other matters released pursuant to this Agreement and Release, and that it has full right, title and authority to enter into this instrument. Each party represents and warrants that it has been represented by counsel of its own choosing in connection with this Agreement and Release.
11. All rights of City shall survive completion of the Work or termination of the Contract, and execution of this Agreement and Release.

***** CAUTION: THIS IS A RELEASE - READ BEFORE EXECUTING *****

CITY

By: _____
Signature

Name: _____
Print

Its: _____
Title

ATTEST:

Title

Print

[CONTRACTOR]

By: _____
Signature

Name: _____
Print

Its: _____
Title

[CONTRACTOR]

By: _____
Signature

Name: _____
Print

Its: _____
Title

Pre-approved as to form:
CITY ATTORNEY
8/2016

END OF DOCUMENT

DOCUMENT 00 6536

GUARANTY

TO: The City of Berkeley ("City"), for construction of Fire Station No. 6 Remodel located at 999 Cedar Street, Berkeley, CA 94710, California.

The undersigned guarantees all construction performed on this Project and also guarantees all material and equipment incorporated therein.

Contractor hereby grants to City for a period of one year following the date of Final Acceptance of the Work completed, or such longer period specified in the Contract Documents, its unconditional warranty of the quality and adequacy of all of the Work including, without limitation, all labor, materials and equipment provided by Contractor and its Subcontractors of all tiers in connection with the Work.

Neither final payment nor use nor occupancy of the Work performed by the Contractor shall constitute an acceptance of Work not done in accordance with this Guaranty or relieve Contractor of liability in respect to any express warranties or responsibilities for faulty materials or workmanship. Contractor shall remedy any defects in the Work and pay for any damage resulting therefrom, which shall appear within one year, or longer if specified, from the date of Final Acceptance of the Work completed.

If within one year after the date of Final Acceptance of the Work completed, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be Defective, Contractor shall promptly, without cost to City and in accordance with City's written instructions, correct such Defective Work. Contractor shall remove any Defective Work rejected by City and replace it with Work that is not Defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, City may have the Defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct Defective Work, or defects are discovered outside the correction period, City shall have all rights and remedies granted by law.

Inspection of the Work shall not relieve Contractor of any of its obligations under the Contract Documents. Even though equipment, materials, or Work required to be provided under the Contract Documents have been inspected, accepted, and estimated for payment, Contractor shall, at its own expense, replace or repair any such equipment, material, or Work found to be Defective or otherwise not to comply with the requirements of the Contract Documents up to the end of the guaranty period.

All abbreviations and definitions of terms used in this Agreement shall have the meanings set forth in the Contract Documents.

The foregoing Guaranty is in addition to any other warranties of Contractor contained in the Contract Documents, and not in lieu of, any and all other liability imposed on Contractor under the Contract Documents and at law with respect to Contractor's duties, obligations, and performance under the Contract Documents. In the event of any conflict or inconsistency between the terms of this Guaranty and any warranty or obligation of the Contractor under the Contract Documents or at law, such inconsistency or conflict shall be resolved in favor of the higher level of obligation of the Contractor.

Date: _____, 20__

Contractor's name

By: _____
Signature

Print Name

Title

Street Address

City, State, Zip code

END OF DOCUMENT

DOCUMENT 00 6580**CITY OF BERKELEY CONTRACTING POLICIES**

Contractor shall comply with the City of Berkeley's adopted employment policies applying to City construction projects as described in Document 00 7317. The following certifications/forms shall be submitted in accordance with Document 00 2113 Instructions to Bidders:

- Memorandum of Understanding
- Workforce Composition Form
- Agreement for Change in Subcontractors
- Nuclear Free Zone Disclosure Form
- Oppressive States Compliance Statement
- Sanctuary City Compliance Certification
- Hardwood Disclosure Form
- First Source Construction Agreement (for projects between \$100,000 and \$500,000)
- Community Workforce Agreement., Agreement to be Bound (for projects over \$500,000)
- Not applicable to this project
- Right to Audit Form
- Certification Of Compliance With Equal Benefits Ordinance
- Taxpayer Identification Report
- Contractor's License
- City of Berkeley Business License

**CITY OF BERKELEY
MEMORANDUM OF UNDERSTANDING
(MOU)**

1. The Contractor (and all Subcontractors) agree not to discriminate pursuant to City Ordinance No. 5876.
2. The Contractor agrees that he/she is also responsible for his/her Subcontractors' compliance with City of Berkeley Ordinance No. 5876.
3. For contracts over \$100,000, the Contractor agrees to comply with Ordinance No. 5876 as applied to the First Source Program (see Section 8 of Ordinance 5876).

The Contractor agrees to submit periodic employment and wage reports to the City's Contract Compliance Officer upon reasonable request.

Contractor

City of Berkeley Contracts Compliance Officer
Or his/her designee

Date

Date

**CITY OF BERKELEY
WORKFORCE COMPOSITION FORM FOR ALL CONSTRUCTION CONTRACTS**

This form is to be completed and submitted prior to the Contract Compliance Conference. The Contractor and all Subcontractors who will do work valued at \$3,000 or more are required to submit this form. Weekly payroll reports will be compared to this listing to monitor for compliance. A payroll printout or other listing of employees providing the same information will be accepted.

Name of Contractor/Subcontractor: _____

Project: _____

Name		Race*	Sex**	Trade/Craft	Basic Hourly Rate	Hire Date	Employees to be used on this job

* A=Asian or Pacific Islander **M = Male
 AI=American Indian **F = Female
 B=Afro American
 C=Caucasian
 H=Hispanic (Mexican, Puerto Rican,
 Spanish, Cuban, Chicano, Central
 or South American)
 8/91

Signature: _____ Date: _____
 Contractor/Subcontractor

Verified By: _____ Date: _____
 City of Berkeley Contracts Compliance Officer
 or his/her designee

**CITY OF BERKELEY
AGREEMENT FOR CHANGE IN SUB-CONTRACTORS**

I agree to use the Subcontractor(s) listed in the signed contract with the City of Berkeley. If it should become necessary to change Subcontractors, I will notify the Capital Projects Manager by completing the following information:

Current Subcontractor(s)	Alternate Subcontractors	Reason for Change	Date

Signed by:

Verified by:

Prime Contractor

Subcontractor

City of Berkeley Contracts Compliance Officer
Or his/her designee

Date: _____

Date: _____

Date: _____

**CITY OF BERKELEY
NUCLEAR FREE ZONE DISCLOSURE FORM**

I (we) certify that:

1. I am (we are) fully cognizant of any and all contracts held, products made or otherwise handled by this business entity, and of any such that are anticipated to be entered into, produced or handled for the duration of its contract(s) with the City of Berkeley. (To this end, this disclosure form may be signed by more than one individual, if a description of which type of contracts each individual is cognizant is attached.)

2. I (we) understand that Section 12.90.070 of the Nuclear Free Berkeley Act (Berkeley Municipal Code Ch. 12.90; Ordinance No. 5784-N.S.) prohibits the City of Berkeley from contracting with any person or business that knowingly engages in work for nuclear weapons.

3. I (we) understand the meaning of the following terms as set forth in Berkeley Municipal Code section 12.90.130:

"Work for nuclear weapons" is any work the purpose of which is the development, testing, production, maintenance or storage of nuclear weapons or the components of nuclear weapons; or any secret or classified research or evaluation of nuclear weapons; or any operation, management or administration of such work.

"Nuclear weapon" is any device, the intended explosion of which results from the energy released by reactions involving atomic nuclei, either fission or fusion or both. This definition of nuclear weapons includes the means of transporting, guiding, propelling or triggering the weapon if and only if such means is destroyed or rendered useless in the normal propelling, triggering, or detonation of the weapon.

"Component of a nuclear weapon" is any device, radioactive or non-radioactive, the primary intended function of which is to contribute to the operation of a nuclear weapon (or be a part of a nuclear weapon).

4. Neither this business entity nor its parent nor any of its subsidiaries engages in work for nuclear weapons or anticipates entering into such work for the duration of its contract(s) with the City of Berkeley.

I (we) declare under penalty of perjury of the laws of the State of California that the foregoing is true and correct.

Signed: _____

Date: _____

Printed Name and Title(s): _____

Company: _____

CITY OF BERKELEY

Oppressive States Compliance Statement for Personal Services

The undersigned, an authorized agent of _____ (hereafter "Vendor"), has had an opportunity to review the requirements of Berkeley City Council Resolution Nos. 59,853-N.S., 60,382-N.S., and 70,606-N.S., (hereafter "Resolutions"). Vendor understands and agrees that the City may choose with whom it will maintain business relations and may refrain from contracting with those Business Entities which maintain business relationships with morally repugnant regimes. Vendor understands the meaning of the following terms used in the Resolutions:

"Business Entity" means "any individual, firm, partnership, corporation, association or any other commercial organization, including parent-entities and wholly-owned subsidiaries" (to the extent that their operations are related to the purpose of the contract with the City).

"Oppressive State" means: **Tibet Autonomous Region, the provinces of Aho, Kham, and U-Tsang; and Burma (Myanmar)**

"Personal Services" means "the performance of any work or labor and shall also include acting as an independent contractor or providing any consulting advice or assistance, or otherwise acting as an agent pursuant to a contractual relationship."

Contractor understands that it is not eligible to receive or retain a City contract if at the time the contract is executed, or at any time during the term of the contract it provides Personal Services to:

- a. The governing regime in any Oppressive State.
- b. Any business or corporation organized under the authority of the governing regime of any Oppressive State.
- c. Any person for the express purpose of assisting in business operations or trading with any public or private entity located in any Oppressive State.

Vendor further understands and agrees that Vendor's failure to comply with the Resolution shall constitute a default of the contract and the City Manager may terminate the contract and bar Vendor from bidding on future contracts with the City for five (5) years from the effective date of the contract termination.

The undersigned is familiar with, or has made a reasonable effort to become familiar with, Vendor's business structure and the geographic extent of its operations. By executing the Statement, Vendor certifies that it complies with the requirements of the Resolution and that if any time during the term of the contract it ceases to comply, Vendor will promptly notify the City Manager in writing.

Based on the foregoing, the undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

Business Entity: _____

I am unable to execute this Statement; however, Vendor is exempt under Section VII of the Resolution. I have attached a separate statement explaining the reason(s) Vendor cannot comply and the basis for any requested exemption.

Signature: _____ Date: _____

Contract Description/Specification No.: _____

ATTACHMENT D

Rev. 1/1/2023

CITY OF BERKELEY
Sanctuary City Compliance Statement

The undersigned, an authorized agent of _____(hereafter "Contractor"), has had an opportunity to review the requirements of Berkeley Code Chapter 13.105 (hereafter "Sanctuary City Contracting Ordinance" or "SCCO"). Contractor understands and agrees that the City may choose with whom it will maintain business relations and may refrain from contracting with any person or entity that provides Data Broker or Extreme Vetting services to the U.S. Immigration and Customs Enforcement Division of the United States Department of Homeland Security ("ICE"). Contractor understands the meaning of the following terms used in the SCCO:

- a. "Data Broker" means either of the following:
 - i. The collection of information, including personal information about consumers, from a wide variety of sources for the purposes of reselling such information to their customers, which include both private-sector business and government agencies;
 - ii. The aggregation of data that was collected for another purpose from that for which it is ultimately used.
- b. "Extreme Vetting" means data mining, threat modeling, predictive risk analysis, or other similar services." Extreme Vetting does not include:
 - i. The City's computer-network health and performance tools;
 - ii. Cybersecurity capabilities, technologies and systems used by the City of Berkeley Department of Information Technology to predict, monitor for, prevent, and protect technology infrastructure and systems owned and operated by the City of Berkeley from potential cybersecurity events and cyber-forensic based investigations and prosecutions of illegal computer based activity.

Contractor understands that it is not eligible to receive or retain a City contract if at the time the Contract is executed, or at any time during the term of the Contract, it provides Data Broker or Extreme Vetting services to ICE.

Contractor further understands and agrees that Contractor 's failure to comply with the SCCO shall constitute a material default of the Contract and the City Manager may terminate the Contract and bar Contractor from bidding on future contracts with the City for five (5) years from the effective date of the contract termination.

By executing this Statement, Contractor certifies that it complies with the requirements of the SCCO and that if any time during the term of the Contract it ceases to comply, Contractor will promptly notify the City Manager in writing. Any person or entity who knowingly or willingly supplies false information in violation of the SCCO shall be guilty of a misdemeanor and up to a \$1,000 fine.

Based on the foregoing, the undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this _____day of _____, 20__, at _____, California.

Printed Name: _____ Title: _____

Signed: _____ Date: _____

Business Entity: _____

SCCO CompStmnt (Oct2019)

**CITY OF BERKELEY
HARDWOOD DISCLOSURE FORM
For use by vendors on contracts utilizing lumber**

1. I understand that on December 12, 1995, the City Council directed staff not to purchase lumber from companies that purchase or sell wood or paper products that come from tropical rainforests. I understand that wood species with tropical origins include, but are not limited to: Apitong, Banak, Bocote, Bubinga, Cocobolo, Cordia, Ebony, Goncalo alves, Greenheart, Iroko, Jelutang, Koa, Luauan, Mahogany, Meranti, Padauk, Purpleheart, Ramin, Rosewood, Satinwood, Teak, Virola, Wenge, and Zebrawood.

2. I am knowledgeable about the wood and paper products purchased and sold by this company.

3. This company does not currently purchase or sell wood or paper products having their origins in tropical rainforests. In addition, this company will not, for the duration of its contract with the City of Berkeley, purchase or sell wood or paper products having their origins in tropical rainforests.

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

Signed: _____ Date: _____

Printed Name & Title: _____

Company: _____

I am unable to sign this disclosure form for the following reason(s):

FIRST SOURCE CONSTRUCTION AGREEMENT**EXHIBIT "A"**

First Source Construction Agreement

I certify that:

- I. I am authorized to enter into this agreement on behalf of the company whose name appears below ("Contractor").
- II. Contractor understands and agrees to comply with the City of Berkeley First Source Construction Agreement.
- III. **I choose Method One: check here _____**
 - A. Contractor understands that selecting Method One agreement with the City of Berkeley means that Contractor agrees as follows:
 1. To utilize the First Source Program Construction Employment Program as the first place for recruitment and referral of applicants for new and replacement workers.
 2. To allow the First Source Program a minimum of seventy-two (72) hours to refer applicants to Contractors. (Contractor may apply to the City of Berkeley for a waiver of the seventy-two hour requirement for an emergency situation.)
 3. To employ qualified applicants referred by the First Source Program.
 4. To fully document the reason(s) for not hiring persons referred by the First Source Program.
 5. To provide to the First Source Program, upon request, information on the employment status of First Source Program placements, and reason for separation if employee is terminated.
 - B. Should the First Source Program be unable to provide the employees needed, Contractor or subcontractor is relieved of its obligation to achieve the goals of the First Source Program.
 1. No documentation of "good Faith Effort Steps" would be required of Contractor and subcontractors
 2. No penalty would be assessed.
 - C. Contractor must go back to the First Source Program whenever its employment needs increase, to comply with the First Source Program.
 - D. Should Contractor or a listed subcontractor fail to comply with the First Source Program, Contractor shall be liable for liquidated damages in the amount of \$1,000 or 1% of the contract amount for each day of non-compliance. In addition, Contractor or listed subcontractor may be deemed a non-responsible bidder in connection with future City of Berkeley contracts.

IV. I choose Method Two: check here _____

- A. Should the contractor choose Method Two, Contractor can use any means of hiring Berkeley residents to achieve the goal. This also can include using union hiring halls requesting in writing for Berkeley residents. A copy must be sent to the First Source Program.
- B. Should Contractor or subcontractor fail to achieve the goals at any time during the course of this project, Contractor or listed subcontractor will be required to document compliance with each of the "good Faith Effort Steps" listed in the First Source Program description document.
- C. Should Contractor or a listed subcontractor fail to comply with the First Source Program, Contractor shall be liable for liquidated damages in the amount of \$1,000 or 1% of the contract amount for each day of non-compliance. In addition, Contractor or listed subcontractor may be deemed a non-responsible bidder in connection with future City of Berkeley contracts.

Company Name

Owner/Authorized Representative Signature

Address

Printed Name of Owner / Authorized Representative

Telephone Number

AGREEMENT TO BE BOUND

The undersigned, as a Contractor or Subcontractor ("Contractor") on a City Project ("Project"), for and in consideration of the award to it of a contract to perform work on said Project, and in further consideration of the mutual promises made in the Project's Community Workforce Agreement ("Agreement"), a copy which was received and is acknowledged, hereby:

1. Accepts and agrees to be bound by the terms and conditions of the Agreement, together with any and all amendments and supplements now existing or which are later made to said Agreement.
2. Certifies that it has no commitments or agreements which would preclude its full and complete compliance with the terms and conditions of said Agreement;
3. Agrees to secure from any Contractor (as defined in said Agreement) which is or becomes a subcontractor (or any tier) to it, and from any successors, a duly executed Agreement to be Bound in form identical to this document.
4. Contractor agrees that it shall be bound by all applicable trust agreements and plans for the provision of such fringe benefits as accrue to the direct benefit of the construction persons, including Health and Welfare, Pension, Training, Vacation, and/or other direct benefits provided pursuant to the appropriate craft agreement contained in Schedule "A" of Agreement.

Date: _____

Company Name: _____

Name of Prime Contractor or Higher Level Subcontractor:

Name of Project: _____

Signature: _____

Print Name: _____

Title: _____

Mailing Address: _____

Email Address: _____

Contractor's License #: _____

Motor Carrier Permit (CA) #: _____

CITY OF BERKELEY RIGHT TO AUDIT FORM

The Contractor agrees that pursuant to Section 61 of the Berkeley City Charter, the City Auditor's office may conduct an audit of Contractor's financial, performance and compliance records maintained in connection with the operations and services performed under this contract.

In the event of such audit, Contractor agrees to provide the Auditor with reasonable access to Contractor's employees and make all such financial, performance and compliance records available to the Auditor's office. City agrees to provide Contractor an opportunity to discuss and respond to any findings before a final audit report is filed.

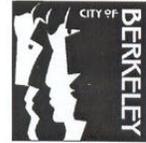
Contractor's signature _____ Date: _____

Print Name and Title: _____

Company: _____

To be completed by Contractor/Vendor

Form EBO-1 CITY OF BERKELEY



CERTIFICATION OF COMPLIANCE WITH EQUAL BENEFITS ORDINANCE

If you are a contractor, return this form to the originating department/project manager. If you are a vendor (supplier of goods), return this form to the Purchasing Division of the Finance Dept.

SECTION 1. CONTRACTOR/VENDOR INFORMATION

Form with fields for Name, Vendor No., Address, City, State, ZIP, Contact Person, Telephone, E-mail Address, Fax No.

SECTION 2. COMPLIANCE QUESTIONS

- A. The EBO is inapplicable to this contract because the contractor/vendor has no employees.
B. Does your company provide (or make available at the employees' expense) any employee benefits?
C. Does your company provide (or make available at the employees' expense) any benefits to the spouse of an employee?
D. Does your company provide (or make available at the employees' expense) any benefits to the domestic partner of an employee?
E. Are the benefits that are available to the spouse of an employee identical to the benefits that are available to the domestic partner of the employee?

SECTION 3. PROVISIONAL COMPLIANCE

- A. Contractor/vendor is not in compliance with the EBO now but will comply by the following date:
B. If you have taken all reasonable measures to comply with the EBO but are unable to do so, do you agree to provide employees with a cash equivalent?*

* The cash equivalent is the amount of money your company pays for spousal benefits that are unavailable for domestic partners.

SECTION 4. REQUIRED DOCUMENTATION

At time of issuance of purchase order or contract award, you may be required by the City to provide documentation (copy of employee handbook, eligibility statement from your plans, insurance provider statements, etc.) to verify that you do not discriminate in the provision of benefits.

SECTION 5. CERTIFICATION

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I am authorized to bind this entity contractually. By signing this certification, I further agree to comply with all additional obligations of the Equal Benefits Ordinance that are set forth in the Berkeley Municipal Code and in the terms of the contract or purchase order with the City.

Executed this _____ day of _____, in the year _____, at _____, _____
(City) (State)

Name (please print)

Signature

Title

Federal ID or Social Security Number

FOR CITY OF BERKELEY USE ONLY

- Non-Compliant (The City may not do business with this contractor/vendor)
- One-Person Contractor/Vendor Full Compliance Reasonable Measures
- Provisional Compliance Category, Full Compliance by Date: _____
- Staff Name(*Sign and Print*): _____ Date: _____

TAXPAYER IDENTIFICATION REPORT

NAME/COMPANY'S NAME: _____

MAILING ADDRESS: _____

SOCIAL SECURITY NO.: _____

OR

EMPLOYER IDENTIFICATION NO.: _____

My Company is a Corporation []

My Company is not a Corporation []

I certify that the above information is true and correct:

(Signature)

(Title)

The Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248) requires the above reporting information be furnished to the City.

Persons who do not furnish their tax information numbers become subject to backup withholding by the City at a rate of 20% from each disbursement made to the recipient.

END OF DOCUMENT

DOCUMENT 007200

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GENERAL CONDITIONS

ARTICLE 1 – INTERPRETATION OF CONTRACT DOCUMENTS

1.01 Interpretation Of Documents

- A. Contract Documents are complementary; what is called for by one is as binding as if called for by all.
- B. Individual Contract Documents subdivide at first level into Articles, and then into paragraphs.

1.02 Order Of Precedence Of Documents

- A. In the case of discrepancy or ambiguity in the Contract Documents, the following order of precedence shall prevail:
 - 1. Modifications in inverse chronological order (i.e., most recent first), and in the same order as specific portions they are modifying;
 - 2. Agreement Forms (Document 00 5200), and terms and conditions referenced therein;
 - 3. Supplementary General Conditions (Document 00 7201 et seq), if included;
 - 4. General Conditions (Document 00 7200);
 - 5. Division 1 Specifications, if included;
 - 6. Drawings and Technical Specifications (Division 2 and above);
 - 7. Written numbers over figures, unless obviously incorrect;
 - 8. Figured dimensions over scaled dimensions;
 - 9. Large-scale Drawings over small-scale Drawings.
- B. Any conflict between Drawings and Technical Specifications (Division 2 and above) will be resolved in favor of the document of the latest date (i.e., the most recent document), and if the dates are the same or not determinable, then in favor of Specifications.
- C. Any conflict between a bill or list of materials shown in the Contract Documents and the actual quantities required to complete Work required by Contract Documents, will be resolved in favor of the actual quantities.
- D. All Technical Specifications included in the Project manual shall be included within the Contract Documents unless identified otherwise.

ARTICLE 2 – PRE-BID INVESTIGATIONS

2.01 Pre-Bid Investigations Required

- A. Prior to and as a condition of submitting a Bid and executing Document 00 5200 (Agreement), Contractor shall make reasonable efforts to investigate fully the Work of the Contract. Contractor shall visit the Site, examine thoroughly and understand fully the nature and extent of the Contract Documents, Work, Site, locality, actual conditions and as-built conditions.
- B. Contractor's investigation shall include, without limitation, requesting and thoroughly examining of all reports of exploration and tests of subsurface conditions, as-built drawings, drawings, product specification(s) or reports, made available by City for contracting purposes or during Contractor's pre-bid investigations, of existing above ground and (to the extent applicable) below ground conditions (together, "Existing Conditions Data"), including, as applicable, Underground Facilities, geotechnical data, as-built data, utility surveys, record documents of all types, hazardous materials surveys, or similar materials which may appear or be referenced in the Project Manual or the in the Contract Documents, 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 which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.
- C. Contractor's investigations shall consider fully the fact that Existing Conditions Data is in many cases based on information furnished to City by others (e.g., the prior owner or builders), and that due to their age or their chain of custody since preparation, may not meet current industry standards for accuracy. Contractor shall also: (i.) provide City with prompt written notice of all

conflicts, errors, ambiguities, or discrepancies of any type, that it discovered in or among the Contract Documents and the Existing Conditions Data, and (ii.) subject to City's approval, conduct any such additional or supplementary examinations, investigations, explorations, tests, studies and data compilations, concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which Contractor may deem necessary in order to perform and furnish the Work in accordance with the terms and conditions of Contract Documents.

- D. During performance of the Contract, Contractor will be charged with knowledge of all information that it should have learned in performing these pre-bid investigations and other obligations, and shall not be entitled to Change Orders (time or compensation) due to any information, error, inconsistency, omission, or conditions that Contractor should have known as a part of this Work. Contractor shall be responsible for the resultant losses, including, without limitation, the cost of correcting Defective Work.

2.02 Limited Reliance Permitted On City's Existing Conditions Data

- A. Regarding aboveground and as-built conditions shown on the Contract Documents or supplied by City, such information has been compiled in good faith, however, City does not expressly or impliedly warrant or represent that such information is correctly shown or indicated, or otherwise complete for construction purposes. Contractor must independently verify such information as part of its pre-bid investigations, and where conditions are not reasonably verifiable or discrepancies are identified, bring such matters to City's attention through written question issued during the bid period. In executing Document 00 5200 (Agreement), Contractor shall rely on the results of its own independent investigation and shall not rely on City-supplied information regarding aboveground conditions and as-built conditions, and Contractor shall accept full responsibility for its verification work sufficient to complete the Work as intended.
- B. Regarding subsurface conditions other than Underground Facilities shown on the Contract Documents or otherwise supplied by City, Contractor 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 in the Contract Documents. City is not responsible for the completeness of any subsurface condition information, Contractor's conclusions or opinions drawn from any subsurface condition information, or subsurface conditions that are not specifically shown. (For example, City is not responsible for soil conditions in areas contiguous to areas where a subsurface condition is shown.)

2.03 Pre-Bid Investigation Requirements For Excavation And Utilities Relocation Projects

- A. As part of its pre-bid investigations for Projects involving excavation and/or relocation of existing utilities, Contractor shall make reasonable efforts to verify information regarding Underground Facilities, including but not limited to, requesting additional information or verification of information as necessary.
- B. Because of the nature and location of City and the Project, the existence of Underground Facilities is deemed inherent in the Work of the Contract, as is the fact that Underground Facilities are not always accurately shown or completely shown on as-built records, both as to their depth and location. Contractor shall, therefore, take care to note the existence and potential existence of Underground Facilities, in particular, above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, chemical, hot water, and other similar items and utilities. Contractor shall carefully consider all supplied information, request additional information Contractor may deem necessary, and visually inspect the Site for above ground indications of Underground Facilities (such as, for example not by way of limitation, the existence of existing service laterals, appurtenances or other types of utilities, indicated by the presence of an underground transmission main or other visible facilities, such as buildings, new asphalt, meters and junction boxes, on or adjacent to the Site). Contractor shall also consider local underground conditions and typical practices for Underground Facilities, either through its own direct knowledge or through its subcontractors, and fully consider this knowledge in assessing the existing information and the reasonableness of its reliance.

ARTICLE 3 – SUBCONTRACTORS**3.01 Subcontractor Listing Law**

- A. Contractor shall comply with the Subcontractor Listing law, California Public Contract Code §§4101 et seq. Contractor shall not substitute any other person or firm in place of any Subcontractor listed in the Bid except as may be allowed by law.
- B. Subcontractors shall not assign or transfer their subcontracts or permit them to be performed by any other contractor without City's written approval. At City's request, Contractor shall provide City with a complete copy of all executed subcontracts or final commercial agreements with Subcontractors and/or suppliers.

3.02 Subcontracts

- A. Subcontract agreements shall preserve and protect the rights of City under the Contract Documents so that subcontracting will not prejudice such rights. To the extent of the Work to be performed by a Subcontractor, Contractor shall require the Subcontractor's written agreement (1) to be bound to the terms of Contract Documents and (2) to assume vis-à-vis Contractor all the obligations and responsibilities that Contractor assumes toward City under the Contract Documents. (These agreements include for example, and not by way of limitation, all warranties, claims procedures and rules governing submittals of all types to which Contractor is subject under the Contract Documents.)
- B. Contractor shall provide for the assignment to City of all rights any Subcontractor (of any tier) may have against any manufacturer, supplier, or distributor for breach of warranties and guarantees relating to the Work performed by the Subcontractor under the Contract Documents. Subcontracts shall provide and acknowledge City as an intended third-party beneficiary of each subcontract and supply contract (of any tier).

ARTICLE 4 – DRAWINGS AND SPECIFICATIONS**4.01 Intent Of Drawings And Specifications**

- A. Contractor shall interpret words or phrases used to describe Work (including services), materials, or equipment that have well-known technical or construction industry or trade meaning in accordance with that meaning. Drawings' intent specifically includes the intent to depict construction that complies with all applicable laws, codes and standards.
- B. As part of the "Work," Contractor shall provide all labor, materials, equipment, machinery, tools, facilities, services, employee training and testing, hoisting facilities, Shop Drawings, storage, testing, security, transportation, disposal, the securing of all necessary or required field dimensions, the cutting or patching of existing materials, notices, permits, documents, reports, agreements and any other items required or necessary to timely and fully complete Work described and the results intended by Contract Documents and, in particular, Drawings and Specifications. Divisions and Specification Sections and the identification on any Drawings shall not control Contractor in dividing Work among Subcontractors or suppliers or delineating the Work to be performed by any specific trade.
- C. Contractor shall perform reasonably implied parts of Work as "incidental work" although absent from Drawings and Specifications. Incidental work includes any work not shown on Drawings or described in Specifications that is necessary or normally or customarily required as a part of the Work shown on Drawings or described in Specifications. Incidental work includes any work necessary or required to make each installation satisfactory, legally operable, functional, and consistent with the intent of Drawings and Specifications or the requirements of Contract Documents. Contractor shall perform incidental work without extra cost to City. Incidental work shall be treated as if fully described in Specifications and shown on Drawings, and the expense of incidental work shall be included in price Bid and Contract Sum.

4.02 Checking Of Drawings And Specifications

- A. Before undertaking each part of Work, Contractor shall carefully study and compare Contract Documents and check and verify pertinent figures shown in the Contract Documents and all

applicable field measurements. Contractor shall be responsible for any errors that might have been avoided by such comparison. Figures shown on Drawings shall be followed; Contractor shall not scale measurements. Contractor shall promptly report to City, in writing, any conflict, error, ambiguity or discrepancy that Contractor may discover. Contractor shall obtain a written interpretation or clarification from City before proceeding with any Work affected thereby. Contractor shall provide City with a follow-up correspondence every ten calendar days until it receives a satisfactory interpretation or clarification.

4.03 Interpretation Of Drawings And Specifications

- A. A typical or representative detail on Drawings shall constitute the standard for workmanship and material throughout corresponding parts of Work. Where necessary, and where reasonably inferable from Drawings, Contractor shall adapt such representative detail for application to such corresponding parts of Work. The details of such adaptation shall be subject to prior approval by City. Repetitive features shown in outline on Drawings shall be in exact accordance with corresponding features completely shown.
- B. Should any discrepancy appear or any misunderstanding arise as to the import of anything contained in Drawings and Specifications, or should Contractor have any questions or requests relating to Drawings or Specifications, Contractor shall refer the matter to City, in writing, with a copy to the Architect/Engineer. City will issue with reasonable promptness written responses, clarifications or interpretations as City may determine necessary, which shall be consistent with the intent of and be reasonably inferable from Contract Documents. Such written clarifications or interpretations shall be binding upon Contractor. If Contractor believes that a written response, clarification or interpretation justifies an adjustment in the Contract Sum or Contract Time, Contractor shall give City prompt written notice. If the parties are unable to agree to the amount or extent of the adjustment, if any, then Contractor shall perform the Work in conformance with City's response, clarification, or interpretation and may make a written claim for the adjustment as provided in Article 12.
- C. The following general specifications shall apply wherever in the Specifications, or in any directions given by City in accordance with or supplementing Specifications, it is provided that Contractor shall furnish materials or manufactured articles or shall do Work for which no detailed specifications are shown. Materials or manufactured articles shall be of the best grade, in quality and workmanship, obtainable in the market from firms of established good reputation. If not ordinarily carried in stock, the materials or manufactured articles shall conform to industry standards for first class materials or articles of the kind required, with due consideration of the use to which they are to be put. Work shall conform to the usual standards or codes, such as those cited herein, for first class work of the kind required. Contractor shall specify in writing to City the materials to be used or Work to be performed under this Paragraph ten Business Days prior to furnishing such materials or performing such Work.

4.04 Use Of Drawings And Specifications.

- A. Drawings, Specifications and other Contract Documents were prepared for use for Work of Contract Documents only. No part of Contract Documents shall be used for any other construction or for any other purpose except with the written consent of City. Any unauthorized use of Contract Documents is prohibited and at the sole liability of the user.

ARTICLE 5 – COMMENCEMENT OF THE WORK

5.01 Submission Of Required Schedules

- A. Contractor shall submit to City in draft for review and discussion at the Preconstruction Conference, and in final prior to the first payment application, the following schedules:
 - 1. Schedule of Values
 - 2. Progress Schedule, and
 - 3. Schedule of Submittals.
- B. No progress payment shall be due or owing to Contractor until such schedules are submitted to and acceptable to City and/or Architect/Engineer as meeting the requirements of the Contract

Documents. In City's sole discretion, City may elect to instead withhold a portion of any progress payment for unacceptable compliance with contract requirements for such schedules.

- C. City's acceptance of Contractor's schedules will not create any duty of care or impose on City any responsibility for the sequencing, scheduling or progress of Work nor will it interfere with or relieve Contractor from Contractor's full responsibility therefore.

5.02 Commencement Date Of Contract Time

- A. The Contract Time will commence to run on the 60th Day after the issuance of the Notice of Award or, if a Notice to Proceed is given, on the date indicated in the Notice to Proceed.
- B. City may give a Notice to Proceed at any time within 60 calendar days after the Notice of Award. Contractor shall not do any Work at the Site prior to the date on which the Contract Time commences to run.

ARTICLE 6 – CONTRACTOR'S ORGANIZATION AND EQUIPMENT

6.01 Contractor's Legal Address

- A. Address and facsimile number given in Contractor's Bid are hereby designated as Contractor's legal address and facsimile number. Contractor may change its legal address and facsimile number by notice in writing, delivered to City, which in conspicuous language advises City of a change in legal address or facsimile number, and which City accepts in writing. Delivery to Contractor's legal address or depositing in any post office or post office box regularly maintained by the United States Postal Service, in a wrapper with postage affixed, directed to Contractor at legal address, or of any drawings, notice, letter or other communication, shall be deemed legal and sufficient service thereof upon Contractor. Facsimile to Contractor's designated facsimile number of any letter, memorandum, or other communication on standard or legal sized paper, with proof of facsimile transmission, shall be deemed legal and sufficient service thereof upon Contractor.

6.02 Contractor's Superintendents Or Forepersons

- A. Contractor shall at all times be represented on Site by one or more superintendents or forepersons authorized and competent to receive and carry out any instructions that City may give, and shall be liable for faithful observance of instructions delivered to Contractor or to authorized representative or representatives on Site.

6.03 Proficiency In English

- A. Supervisors, security guards, safety personnel and employees who have unescorted access to the Site shall possess proficiency in the English language in order to understand, receive and carry out oral and written communications or instructions relating to their job functions, including safety and security requirements.

6.04 Contractor's And Subcontractors' Employees

- A. Contractor shall employ, and shall permit its Subcontractors to employ, only competent and skillful personnel to do Work. If City notifies Contractor that any of its employees, or any of its Subcontractors' employees on Work is incompetent, unfaithful, disorderly or profane, or fails to observe customary standards of conduct or refuses to carry out any provision of the Contract Documents, or uses threatening or abusive language to any person on Work representing City, or violates sanitary rules, or is otherwise unsatisfactory, and if City requests that such person be discharged from Work, then Contractor or its Subcontractor shall immediately discharge such person from Work and the discharged person shall not be re-employed on the Work except with consent of City.

6.05 Contractor's Use Of The Site

- A. Contractor shall not make any arrangements with any person to permit occupancy or use of any land, structure or building within the limits of the Work, for any purpose whatsoever, either with or without compensation, in conflict with any agreement between City and any owner, former owner

or tenant of such land, structure or buildings. Contractor may not occupy City-owned property outside the limit of the Work as indicated on the Drawings unless it obtains prior approval from City.

6.06 Contractor's Site Office

- A. Unless expressly provided otherwise in the Contract Documents, Contractor shall provide a site office staffed by a resident project manager or job superintendent.

ARTICLE 7 – CITY'S ADMINISTRATION OF WORK

7.01 City's Representative(s)

- A. City's Representative(s) will have limited authority to act on behalf of City as set forth in the Contract Documents.
- B. Except as otherwise provided in these Contract Documents or subsequently identified in writing by City, City will issue all communications to Contractor through City's Representative, and Contractor shall issue all communications to City through City's Representative in a written document delivered to City.
- C. Should any direct communications between Contractor and City's consultants, architects or engineers not identified in Article 2 of Document 00 5200 (Agreement) occur during field visits or by telephone, Contractor shall immediately confirm them in a written document copied to City.

7.02 City's Observation Of The Work

- A. Work shall be performed under City's general observation and administration. Contractor shall comply with City's directions and instructions in accordance with the terms of Contract Documents, but nothing contained in these General Conditions shall be taken to relieve Contractor of any obligations or liabilities under the Contract Documents. City's failure to review or, upon review, failure to object to any aspect of Work reviewed, shall not be deemed a waiver or approval of any non-conforming aspect of Work.
- B. Subject to those rights specifically reserved in the Contract Documents, City will not supervise, or direct, or have control over, or be responsible for, Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or Contractor's failure to comply with laws and regulations applicable to the furnishing or performance of Work. City will not be responsible for Contractor's failure to perform or furnish the Work in accordance with Contract Documents.

7.03 Architect/Engineer's Observation Of Work

- A. City may engage an Architect/Engineer, an independent consultant or Project Manager (collectively for purposes of this Paragraph, "Project Manager/Architect") to assist in administering the Work. If so engaged, Project Manager/Architect will advise and consult with City, but will have authority to act on behalf of City only to extent provided in the Contract Documents or as set forth in writing by City. Project Manager/Architect 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 Work. Project Manager/Architect will not be responsible for or have control over the acts or omissions of Contractor, Subcontractors or their agents or employees, or any other persons performing Work.
- B. Project Manager/Architect may 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 the Contract Documents.
- C. Project Manager/Architect may visit the Site at intervals appropriate to stage of construction to become familiar generally with the progress and quality of Work and to determine in general if Work is proceeding in accordance with Contract Documents. Based on its observations, Project Manager/Architect may recommend to City that it disapproves or rejects Work that Project Manager/Architect believes to be Defective or will not produce a complete Project that conforms to Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by Contract Documents. City will also have authority

to require special inspection or testing of Work, whether or not the Work is fabricated, installed or completed.

- D. Project Manager/Architect may conduct inspections to recommend to City the dates that Contractor has achieved Substantial Completion and Final Acceptance, and will receive and forward to City for review written warranties and related documents required by Contract Documents.

7.04 Owner's And Architect/Engineer's Exercise Of Contract Responsibilities

- A. City, Project Manager, Architect/Engineer and all City's representatives, in performing their duties and responsibilities under the Contract Documents, accept no duties, responsibilities or duty of care, nor may the same be implied or inferred, towards Contractor, any Subcontractor, sub-Subcontractor or supplier, except those set forth expressly in the Contract Documents.

7.05 City's Right Of Access To The Work

- A. During performance of Work, City and its agents, consultants, and employees may at any time enter upon Work, shops or studios where any part of the Work may be in preparation, or factories where any materials for use in Work are being or are to be manufactured, and Contractor shall provide proper and safe facilities for this purpose, and shall make arrangements with manufacturers to facilitate inspection of their processes and products to such extent as City's interests may require. Other contractors performing work for City may also enter upon Work for all purposes required by their respective contracts. Subject to the rights reserved in the Contract Documents, Contractor shall have sole care, custody, and control of the Site and its Work areas.

7.06 City's Right Of Separate Construction

- A. City may perform with its own forces, construction or operations related to the Project, or the Site during Contractor's operations. City may also award separate contracts in connection with other portions of the Project or other construction or operations, on the Site or areas contiguous to the Site, under conditions similar to these Contract Documents, or may have utility owners perform other work.
- B. Contractor shall adjust its schedule and fully coordinate with and shall afford all other contractors, utility districts and City (if City is performing work with its own forces), proper and safe access to the Site, and reasonable opportunity for the installation and storage of their materials. Contractor shall ensure that the execution of its Work properly connects and coordinates with others' work, do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work, and shall cooperate with them to facilitate the progress of the Work.
- C. To the extent that any part of Contractor's Work is to interface with work performed or installed by other contractors or utility owners, Contractor shall inspect and measure the in-place work. Contractor shall promptly report to City in writing any defect in in-place work that will impede or increase the cost of Contractor's interface unless corrected.

ARTICLE 8 – CONTRACTOR'S PROSECUTION AND PROGRESS OF THE WORK

8.01 Contractor To Supervise The Work

- A. Subject to those rights specifically reserved in the Contract Documents, Contractor shall supervise, direct, have control over, and be responsible for, Contractor's means, methods, techniques, sequences or procedures of construction, safety precautions and programs incident thereto, and compliance with laws and regulations applicable to the furnishing or performance of Work.
- B. Contractor shall keep on the Site at all times during Work progress a competent resident Superintendent, who shall not be replaced without City's express written consent. The Superintendent shall be Contractor's representative at the Site and shall have complete authority to act on behalf of Contractor. All communications to and from the Superintendent shall be as binding as if given to or by Contractor.
- C. Contractor shall supervise, inspect, and direct Work competently and efficiently, devoting the

attention and applying such personal skills and expertise as may be required and necessary to perform Work in accordance with Contract Documents. Contractor shall be solely responsible for and have control and charge of construction means, methods, techniques, sequences and procedures, safety precautions and programs in connection with the Work. Contractor shall be responsible to see that the completed Work complies accurately with Contract Documents.

- D. Contractor is fully responsible for Contractor's own acts and omissions. Contractor is responsible for all acts and omissions of its Subcontractors, suppliers, and other persons and organizations performing or furnishing any of the Work, labor, materials, or equipment under a direct or indirect contract with Contractor.
- E. Contractor shall conduct monthly Contractor Safety Committee meetings, and weekly toolbox safety talks.

8.02 Contractor To Maintain Cost Data

- A. Contractor shall maintain full and correct information as to the number of workers employed in connection with each subdivision of Work, the classification and rate of pay of each worker in form of certified payrolls, the cost to Contractor of each class of materials, tools and appliances used by Contractor in Work, and the amount of each class of materials used in each subdivision of Work. Contractor shall provide City with monthly summaries of this information. If Contractor maintains or is capable of generating summaries or reports comparing actual Project costs with Bid estimates or budgets, Contractor shall provide City with a copy of such report upon City's request.
- B. Contractor shall maintain daily job reports recording all significant activity on the job, including the number of workers on Site, Work activities, problems encountered and delays. Contractor shall provide City with copies for each Day Contractor works on the Project, to be delivered to City either the same Day or the following morning before starting work at the Site. Contractor shall take pre-construction and monthly progress photographs of all areas of the Work. Contractor shall maintain copies of all correspondence with Subcontractors and records of meetings with Subcontractors.
- C. City shall have the right to audit and copy Contractor's books and records of any type, nature or description relating to the Project (including but not limited to financial records reflecting in any way costs claimed on the Project), and to inspect the Site, including Contractor's trailer, or other job Site office, and this requirement shall be contained in the subcontracts of Subcontractors working on Site. By way of example, City shall have the right to inspect and obtain copies of all Contract Documents, planning and design documents, Bid proposal and negotiation documents, cost records and job cost variance reports, design modification proposals, value engineering or other cost reduction proposals, revisions made to the original design, job progress reports, photographs, and as-built drawings maintained by Contractor. City and any other applicable governmental entity shall have the right to inspect all information and documents maintained hereunder at any time during the Project and for a period of five years following Final Completion, in accordance with the provisions of Section 8546.7 of the California Government Code. This right of inspection shall not relieve Contractor of its duties and obligations under the Contract Documents. This right of inspection shall be specifically enforceable in a court of law, either independently or in conjunction with enforcement of any other rights in the Contract Documents.

8.03 Contractor To Supply Sufficient Workers And Materials

- A. Unless otherwise required by City under the terms of Contract Documents, Contractor shall at all times keep on the Site materials and employ qualified workers sufficient to prosecute Work at a rate and in a sequence and manner necessary to complete Work within the Contract Time. This obligation shall remain in full force and effect notwithstanding disputes or claims of any type.
- B. At any time during progress of Work should Contractor directly or indirectly (through Subcontractors) refuse, neglect, or be unable to supply sufficient materials or employ qualified workers to prosecute the Work as required, then City may require Contractor to accelerate the Work and/or furnish additional qualified workers or materials as City may consider necessary, at no cost to City. If Contractor does not comply with the notice within three Business Days of date of service thereof, City shall have the right (but not a duty) to provide materials and qualified

workers to finish the Work or any affected portion of Work, as City may elect. City may, at its discretion, exclude Contractor from the Site, or portions of the Site or separate work elements during the time period that City exercises this right. City will deduct from moneys due or which may thereafter become due under the Contract Documents, the sums necessary to meet expenses thereby incurred and paid to persons supplying materials and doing Work. City will deduct from funds or appropriations set aside for purposes of Contract Documents the amount of such payments and charge them to Contractor as if paid to Contractor. Contractor shall remain liable for resulting delay, including liquidated damages and indemnification of City from claims of others.

- C. Exercise by City of the rights conferred upon City in this subparagraph is entirely discretionary on the part of City. City shall have no duty or obligation to exercise the rights referred to in this subparagraph and its failure to exercise such rights shall not be deemed an approval of existing Work progress or a waiver or limitation of City's right to exercise such rights in other concurrent or future similar circumstances. (The rights conferred upon City under this subparagraph are, like all other such rights, cumulative to City's other rights under any provision of the Contract Documents.)

8.04 Contractor To Maintain Project Record Documents

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Contract Modifications, Change Orders, Work Directives, Force Account orders, and written interpretations and clarifications in good order and annotated to show all as-built changes made during construction. These Project Record Documents, together with all approved Samples and a counterpart of all approved Shop Drawings, shall be maintained and available to City for reference. Upon completion of the Work, Contractor shall deliver to City, the Project Record Documents, Samples and Shop Drawings and as-built drawings.
- B. Throughout Contractor's performance of the Work of the Project, Contractor shall maintain construction records to include: shop drawings; product data/material data sheets; samples; submittal; purchases; materials; equipment; inspections; applicable handbooks; applicable codes and standards; maintenance and operating manuals and instructions; RFI Log; Submittal Log; other related documents and revisions which arise out of the Construction Contracts. Contractor shall maintain records of principal building layout lines, elevations for the bottom of footings, floor levels, and key site elevations (certified by a qualified surveyor or professional engineer). Contractor shall make all records available to City. At the completion of the Project, Contractor shall deliver all such records to the City to have a complete set of record as-built drawings.

8.05 Contractor To Not Disrupt City Operation

- A. Contractor shall schedule and execute all Work in a manner that does not interfere with or disrupt City operations, including but not limited to, parking, utilities (electricity, gas, water), noise, access by employees and administration, access by vendors, physicians, patients and any other person or entity using City facilities or doing business with City. Contractor shall produce and supply coordination plans and requests to City, following City procedures, for all necessary interference of construction with City, which City will reasonably cooperate with.

8.06 Contractor To Provide Temporary Facilities And Controls

- A. Unless expressly provided otherwise in the Contract Documents, Contractor shall provide all temporary utilities (including without limitation electricity, water, natural gas), lighting, heating, cooling and ventilating devices, telephone, sanitary facilities, barriers, fences and enclosures, tree and plant protection, fire protection, pollution, erosion, Storm Water Pollution Prevention controls, noise and traffic control, and any other necessary services required for construction, testing or completion of the Work.

ARTICLE 9 – WARRANTY, GUARANTY, AND INSPECTION OF WORK

9.01 Warranty And Guaranty

- A. General Representations and Warranties: Contractor represents and warrants that it is and will

be at all times fully qualified and capable of performing every Phase of the Work and to complete Work in accordance with the terms of Contract Documents. Contractor warrants that all construction services shall be performed in accordance with generally accepted professional standards of good and sound construction practices and all requirements of Contract Documents. Contractor warrants that Work, including but not limited to each item of materials and equipment incorporated therein, shall be new, of suitable grade of its respective kind for its intended use, and free from defects in design, engineering, materials, construction and workmanship. Contractor warrants that Work shall conform in all respects with all applicable requirements of federal, state and local laws, applicable construction codes and standards, licenses, and permits, Drawings and Specifications and all descriptions set forth therein, and all other requirements of Contract Documents. Contractor shall not be responsible, however, for the negligence of others in the specification of specific equipment, materials, design parameters and means or methods of construction where that is specifically shown and expressly required by Contract Documents.

- B. Extended Guarantees: Any guarantee exceeding one year provided by the supplier or manufacturer of any equipment or materials used in the Project shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials and shall supply City with all warranty and guarantee documents relative to equipment and materials incorporated in the Project and guaranteed by their suppliers or manufacturers.
- C. Environmental and Toxics Warranty: The covenants, warranties and representations contained in this Paragraph are effective continuously during Contractor's Work on the Project and following cessation of labor for any reason including, but not limited to, Project completion. Contractor covenants, warrants and represents to City that:
 - 1. To Contractor's knowledge after due inquiry, no lead or Asbestos-containing materials were installed or discovered in the Project at any time during Contractor's construction thereof. If any lead or Asbestos-containing materials were discovered, Contractor made immediate written disclosure to City.
 - 2. To Contractor's knowledge after due inquiry, no electrical transformers, light fixtures with ballasts or other equipment containing PCBs are or were located on the Project at any time during Contractor's construction thereof.
 - 3. To Contractor's knowledge after due inquiry, no storage tanks for gasoline or any other toxic substance are or were located on the Project at any time during Contractor's construction thereof. If any such materials were discovered, Contractor made immediate written disclosure to City.
 - 4. Contractor's operations concerning the Project are and were not in violation of any applicable environmental federal, state, or local statute, law or regulation dealing with hazardous materials substances or toxic substances and no notice from any governmental body has been served upon Contractor claiming any violation of any such law, ordinance, code or regulation, or requiring or calling attention to the need for any Work, repairs, construction, alteration, or installation on or in connection with the Project in order to comply with any such laws, ordinances, codes, or regulations, with which Contractor has not complied. If there are any such notices with which Contractor has complied, Contractor shall provide City with copies thereof.

9.02 Inspection Of Work

- A. Work and materials, and manufacture and preparation of materials, from beginning of construction until Final Completion and acceptance of Work, shall be subject to inspection and rejection by City, its agents, representatives or independent contractors retained by City to perform inspection services, or governmental agencies with jurisdictional interests. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and program so that they may comply therewith as applicable. Upon request or where specified, City shall be afforded access for inspection at the source of supply, manufacture or assembly of any item of material or equipment, with reasonable accommodations supplied for making such inspections.
- B. Contractor shall furnish, in such quantities and sizes as may be required for proper examination and tests, Samples or test specimens of all materials to be used or offered for use in connection

with Work. Contractor shall prepare Samples or test specimens at its expense and furnish them to City. Contractor shall submit all Samples in ample time to enable City to make any necessary tests, examinations, or analyses before the time it is desired to incorporate the material into the Work.

- C. Contractor shall give City timely notice of readiness of Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- D. If applicable laws or regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, and furnish City with the required certificates of inspection, or approval. City will pay the cost of initial testing and Contractor shall pay all costs in connection with any follow-up or additional testing. Contractor shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for the acceptance of materials or equipment to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.
- E. If Contractor covers any Work, or the work of others, prior to any required inspection, test or approval without written approval of City, Contractor shall uncover the Work at City's request. Contractor shall bear the expense of uncovering Work and replacing Work. In any case where Contractor covers Work contrary to City's request, Contractor shall uncover Work for City's observation or inspection at City's request. Contractor shall bear the cost of uncovering Work.
- F. Whenever required by City, Contractor shall furnish tools, labor and materials necessary to make examination of Work that may be completed or in progress, even to extent of uncovering or taking down portions of finished Work. Should Work be found unsatisfactory, cost of making examination and of reconstruction shall be borne by Contractor. If Work is found to be satisfactory, City, in manner herein prescribed for paying for alterations, Modifications, and extra Work, except as otherwise herein specified, will pay for examination.
- G. Inspection of the Work by or on behalf of City, or City's failure to do so, shall not under any circumstances be deemed a waiver or approval of any non-conforming aspect of the Work. Contractor shall have an absolute duty, in the absence of a written Change Order signed by City, to perform Work in conformance with the Contract Documents and to immediately correct Defective Work immediately upon Contractor's knowledge.
- H. Any inspection, evaluation, or test performed by or on behalf of City relating to the Work is solely for the benefit of City, and shall not be relied upon by Contractor. Contractor shall not be relieved of the obligation to perform Work in accordance with the Contract Documents, nor relieved of any guaranty, warranty, or other obligation, as a result of any inspections, evaluations, or tests performed by City, whether or not such inspections, evaluations, or tests are permitted or required under the Contract Documents. Contractor shall be solely responsible for testing and inspecting Work already performed to determine whether such Work is in proper condition to receive later Work.

9.03 Correction Of Defective Work

- A. City may direct Contractor to correct any Defective Work or remove it from the Site and replace it with Work that is not Defective and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting from the correction or removal. Contractor shall be responsible for any and all claims, costs, losses and damages caused by or resulting from such correction or removal. A Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, City may decide the proper amount or, in its discretion may elect to leave the Contract Sum unchanged and deduct from monies due Contractor, all such claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with City's calculations, it may make a claim as provided in Article 12 of this Document 00 7200. City's rights under this Paragraph shall be in addition to any other rights it may have under the Contract Documents or by law.

- B. If Contractor fails to supply sufficient skilled workers, suitable materials or equipment, or to furnish or perform the Work in such a way that the completed Work will conform to Contract Documents, City may order Contractor to replace any such Defective Work, or stop any portion of Work to permit City (at Contractor's expense) to replace such Defective Work. These City rights are entirely discretionary on the part of City, and shall not give rise to any duty on the part of City to exercise the rights for the benefit of Contractor or any other party.

9.04 Acceptance And Correction Of Defective Work By City

- A. City may in its sole discretion elect to accept Defective Work. Contractor shall pay all claims, costs, losses and damages attributable to City's evaluation of and determination to accept such Defective Work. If City accepts any Defective Work prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, City may deduct from monies due Contractor, all claims, costs, losses, damages, expenses and liabilities attributable to the Defective Work. If Contractor disagrees with City's calculations, Contractor may make a claim as provided in Article 12 of this Document 00 7200. If City accepts any Defective Work after final payment, Contractor shall pay to City, an appropriate amount as determined by City.
- B. City may correct and remedy deficiency if, after five calendar days' written notice to Contractor, Contractor fails to correct Defective Work or to remove and replace rejected Work; or provide a plan for correction of Defective Work acceptable to City; or perform Work in accordance with Contract Documents. In connection with such corrective and remedial action, City may exclude Contractor from all or part of the Site; take possession of all or part of 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 Work any materials and equipment stored at the Site or for which City has paid Contractor but which are stored elsewhere. Contractor shall allow City, its representatives, agents, employees, and other contractors and Project Manager/Architect's consultants' access to the Site to enable City to exercise the rights and remedies under this Paragraph. Contractor shall be responsible for all claims, costs, losses, damages, expenses and liabilities incurred or sustained by City in exercising such rights and remedies. 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 to the amount of an appropriate decrease in the Contract Sum, City may deduct from moneys due Contractor, all claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with City's calculations, Contractor may make a claim as provided in Article 12.

9.05 Rights Upon Inspection, Correction Or Acceptance

- A. Contractor shall not be allowed an extension of Contract Time because of any delay in the performance of Work attributable to the exercise by City of its rights and remedies under this Article. Where City exercises its rights under this Article, it retains and may still exercise all other rights it has by law or under the Contract Documents including, but not limited to, the right to terminate Contractor's right to proceed with the Work under the Contract Documents for cause and/or make a claim or back charge where a Change Order cannot be agreed upon.
- B. Inspection by City or its authorized agents or representatives shall not relieve Contractor of its obligation to have furnished material and workmanship in accordance with Contract Documents. Payment for Work completed through periodic progress payments, final payment or otherwise shall not operate to waive City's right to require full compliance with Contract Documents and shall in no way be deemed as acceptance of any defective Work paid therefor. Contractor's obligation to complete the Work in accordance with Contract Documents shall be absolute, unless City agrees otherwise in writing.

9.06 Proof Of Compliance Of Contract Provisions

- A. In order that City may determine whether Contractor has complied or is complying with requirements of Contract Documents not readily enforceable through inspection and tests of

Work and materials, Contractor shall at any time, when requested, submit to City properly authenticated documents or other satisfactory proofs of compliance with all applicable requirements.

- B. Before commencing any portion of Work, Contractor shall inform City in writing as to time and place at which Contractor wishes to commence Work, and nature of Work to be done, in order that proper provision for inspection of Work may occur, and to assure measurements necessary for record and payment. Information shall be given to City a reasonable time in advance of time at which Contractor proposes to begin Work, so that City may complete necessary preliminary work without inconvenience or delay to Contractor.

9.07 Correction Period And Project Warranty Period:

- A. If within one year after the date of Final Acceptance, or such longer period of time as may be prescribed by laws, regulations or by the terms of Contract Documents or any extended warranty or guaranty, any Work (completed or incomplete) is found to be Defective, Contractor shall promptly without cost to City and in accordance with City's written instructions, correct such Defective Work. Contractor shall remove any Defective Work rejected by City and replace it with Work that is not Defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, City may have the Defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct Defective Work, or defects are discovered outside the correction period, City shall have all rights and remedies granted by law.
- B. 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 Work or that item may start to run from an earlier date if so provided by Change Order.
- C. Where Defective Work or rejected Work (and damage to other Work resulting therefrom) 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 shall be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

9.08 No Waiver

- A. Neither recordation of Final Acceptance nor final certificate for payment nor provision of the Contract nor partial or entire use or occupancy of premises by City shall constitute acceptance of Work not done in accordance with Contract Documents nor relieve Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship.
- B. If, after installation, operation, or use of materials or equipment to be provided under Contract proves to be unsatisfactory to City, City shall have right to operate and use materials or equipment until said materials and equipment can, without damage to City, be taken out of service for correction or replacement. Period of use of Defective materials or equipment pending correction or replacement shall in no way decrease guarantee period required for acceptable corrected or replaced items of materials or equipment.
- C. Nothing in the Contract Documents shall be construed to limit, relieve, or release Contractor's, Subcontractors', and equipment suppliers' liability to City for damages sustained as result of latent defects in materials or equipment caused by negligence of Contractor, its agents, suppliers, employees, or Subcontractors.

ARTICLE 10 – MODIFICATIONS OF CONTRACT DOCUMENTS

10.01 City's Right To Direct Changed Work.

- A. City may, without notice to the sureties and without invalidating the Contract, make changes in the Work ("Changed Work"), including without limitation: alterations, deviations, additions to, or

deletions from Contract Documents; increase or decrease the quantity of any item or portion of the Work; expand, reduce or otherwise change the Contract Time; delete any item or portion of the Work; and require extra Work. Contractor shall perform such Work under applicable provisions of the Contract Documents, unless specifically provided otherwise at the time the change is ordered. In the case of any ordered extra Work, City reserves the right to furnish all or portions of associated labor, material, and equipment, which Contractor shall accept and use without payment for costs, markup, profit, or otherwise for such City-furnished labor, materials, and equipment.

- B. If Changed Work is of such a nature as to increase or decrease the time or cost of any part of Work, price fixed in Contract shall be increased or decreased by amount as the Contractor and City may agree upon as reasonable and proper allowance for increase or decrease in cost of Work using the cost guidelines set forth in this Article, and absent such agreement, then as City may direct (with Contractor retaining its rights under Article 12 herein).

10.02 Required Documentation For Changed Work

- A. Changes affecting the Contract Time or Contract Sum of the Work shall be set forth in a written Change Order or Change Directive that shall specify:
1. The Work performed in connection with the change to be made;
 2. The amount of the adjustment of the Contract Sum, if any, and the basis for compensation for the Work ordered; and
 3. The extent of the adjustment in the Contract Time, if any.
- B. A Change Order or Change Directive will become effective when signed by City, notwithstanding that Contractor has not signed it. A Change Order will become effective without Contractor's signature, provided City indicates same thereon (by indicating it as a "unilateral change order").
- C. All changes in any plans and specifications approved by any authority with jurisdiction may also require addenda or change orders approved by that authority.
- D. Where City requests, a performance bond rider covering the changed Work must be executed and delivered to City before proceeding with the changed Work or shortly in time thereafter.

10.03 Procedures And Pricing Of Changed Work

- A. Procedures for changed work and pricing of changed work, claims and all forms of extra compensation, are set forth in Section 01 2600 (Modification Procedures).

ARTICLE 11 – TIME ALLOWANCES

11.01 Time Allowances

- A. Time is of the essence. Contract Time may only be changed by Change Order, and all time limits stated in the Contract Documents are to mean that time is of the essence.

11.02 Excusable Delay And Inexcusable Delay Defined.

- A. Excusable Delay. Subject to the provisions on Notice of Delay below, Contract Time may be adjusted in an amount equal to the time lost due to:
1. Changes in the Work ordered by City ("**Changes**");
 2. Acts or neglect by City, Architect, any City Representative, utility owners or other contractors performing other work, not permitted or provided for in the Contract Documents, provided that Contractor has performed its responsibilities under the Contract Documents (including but not limited to pre-bid investigations) ("**Acts or Neglect**"); or
 3. Fires, floods, epidemics, abnormal weather conditions beyond the parameters otherwise set forth in this Article, earthquakes, civil or labor disturbances, or acts of God (together, "force majeure events"), provided damages resulting therefrom are not the result of Contractor's failure to protect the Work as required by Contract Documents ("**Force Majeure**").
- B. Inexcusable Delay. Contract Time shall not be extended for any period of time where Contractor (and/or any Subcontractor) is delayed or prevented from completing any part of the Work due to a

cause that is within Contractor's risk or responsibility under the Contract Documents. Delays attributable to or within the control of a Subcontractor, or its subcontractors, or supplier, are deemed delays within the control of Contractor.

- C. Float. Float shall be treated as a Project resource. Contractor shall not be entitled to a time extension for impacts that consume float, but do not impact the critical path.

11.03 Notice Of Delay

- A. Within seven calendar days of the beginning of any delay (excepting adverse weather delays), Contractor shall notify City in writing, by submitting a notice of delay that shall describe the anticipated delays resulting from the delay event in question. If Contractor requests an extension of time, Contractor shall submit a Time Impact Evaluation (TIE) within ten calendar days of the notice of delay. City will determine all claims and adjustments in the Contract Time. No claim for an adjustment in the Contract Time will be valid and such claim will be waived if not submitted in accordance with the requirements of this subparagraph. In cases of substantial compliance with the seven-day notice requirement here (but not to exceed twenty-one calendar days from the beginning of the delay event), City may in its sole discretion recognize a claim for delay accompanied with the proper TIE, provided Contractor also shows good faith and a manifest lack of prejudice to City from the late notice.

11.04 Compensable Time Extensions

- A. Subject to other applicable provisions of the Contract Documents, Contractor may be entitled to adjustment in Contract Sum in addition to Contract Time for:
1. Excusable delay caused solely by Changes in the Work ordered by City, as provided above, and/or
 2. Excusable delay caused solely by Acts or Neglect by City or other person, as provided above.

11.05 Non-Compensable Time Extensions

- A. Subject to other applicable provisions of the Contract Documents, Contractor may be entitled to adjustment in Contract Time only, without adjustment in Contract Sum, for
1. Periods of excusable delay caused solely by weather or Force Majeure events as provided above in this Article, or
 2. Periods of concurrent delay, where delay results from two or more causes, one of which is compensable (resulting from Changes or Acts or Neglect as set forth above in this Article), and the other of which is non-compensable or unexcusable, such as: acts or neglect of Contractor, Subcontractors or others for whom Contractor is responsible; other acts, omissions and conditions which would not entitle Contractor to adjustment in Contract Time; adverse weather; and/or actions of Force Majeure as provided above in this Article.

11.06 Adverse Weather

- A. Adverse weather delays may be allowed only if the number of workdays of adverse weather exceeds the parameters listed or referenced immediately below in this subparagraph and Contractor proves that adverse weather actually caused delays to work on the critical path. Contractor shall give written notice of intent to claim an adverse weather day within one Day of the adverse weather day occurring.
- B. Claims for extension of time for rain delay will not be granted unless the number of calendar days work is prevented by rain exceeds 110% of the average number of rain days expected for the period of the Contract Time, based on the records of the National Oceanic & Atmospheric Administration (NOAA) weather station closest to the Project Site, as measured and reported by NOAA. (For example, for California, Oregon and Washington, these figures are contained in the ">=0.10 inch" column at the applicable weather station's "General Climate Summary Table" for "Precipitation" at <http://www.wrcc.dri.edu/Climsum.html>), pro-rated in the individual month Contractor starts and finishes Work. Delays due to adverse weather conditions will not be allowed for weather conditions that fall within these parameters.

- C. In order to qualify as an adverse weather delay with respect to the foregoing parameters, (i.) daily rainfall must exceed .1 inch, and/or (ii.) daily snowfall must exceed 1.0 inch or more, at the NOAA station located closest to the Project site, as measured and reported by NOAA. Notwithstanding these allowances, Contractor shall at all times employ all available mitigation measures to enable Work to continue, Contractor shall take reasonable steps to mitigate potential weather delays, such as dewatering the Site, lime treatment, and covering Work and material that could be affected adversely by weather. Failure to do so shall be cause for City to not grant a time extension due to adverse weather, where Contractor could have avoided or mitigated the potential delay by exercising reasonable care.
- D. Contractor shall include the foregoing precipitation parameters as a monthly activity in its progress schedule. As Work on the critical path is affected by precipitation, Contractor shall notify City and request that the days be moved to the affected activities. Any adverse weather days remaining shall be considered Project float available to either City or Contractor.
- E. Adverse weather delay for precipitation shall be recognized for the actual period of time Contractor proves it was delayed by precipitation exceeding the specified parameters. For example, and not by way of limitation, if precipitation exceeding the specified parameters does not in fact delay Contractor's progress on the critical path, then no time extension shall be recognized; and conversely, if Contractor proves to City's satisfaction that precipitation exceeding the specified parameters causes delay to Contractor for a period longer than the number of precipitation days incurred (e.g., if it rains or snows during grading work), then Contractor shall be entitled to a time extension equal to the actual period of such delay.
- F. During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall employ best practices to protect the Work, manage the construction site and rainwater during inclement weather. Persons performing the Work shall examine surfaces to receive their Work and shall report in writing to Contractor, with copy to City representative and the Architect conditions detrimental to the Work. Failure to examine and report discrepancies makes the Contractor responsible, at no increase in Contract Sum, for corrections City may require. Commencement of Work constitutes acceptance of surface.

11.07 Liquidated Damages

- A. Time is of the essence. Execution of Contract Documents by Contractor shall constitute its acknowledgement that City will actually sustain damages in the form of Contract administration expenses (such as Project management and consultant expenses) in the amount fixed in the Contract Documents for each and every Day during which completion of Work required is delayed beyond expiration of time fixed for completion plus extensions of time allowed pursuant to provisions hereof.
- B. Contractor and City agree that because of the nature of the Project, it would be impractical or extremely difficult to fix the amount of such actual damages incurred by City because of a delay in completion of all or any part of the Work. Contractor and City agree that specified measures of liquidated damages shall be presumed to be the amount of such damages actually sustained by City, and that because of the nature of the Project, it would be impracticable or extremely difficult to fix the actual damages.
- C. Liquidated damages for delay shall cover administrative, overhead, interest on bonds, and general loss of public use damages suffered by City as a result of delay. Liquidated damages shall not cover the cost of completion of the Work, damages resulting from Defective Work, lost revenues or costs of substitute facilities, or damages suffered by others who then seek to recover their damages from City (for example, delay claims of other contractors, subcontractors, tenants, or other third-parties), and defense costs thereof. City may deduct 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 then-accrued liquidated damages.

ARTICLE 12 – CLAIMS BY CONTRACTOR

12.01 Obligation to File Claims for Disputed Work

- A. Should it appear to Contractor that the Work to be performed or any of the matters relative to the

Contract Documents are not satisfactorily detailed or explained therein, or should any questions arise as to the meaning or intent of the Contract Documents, or should any dispute arise regarding the true value of any work performed, work omitted, extra work that the Contractor may be required to perform, time extensions, payment to the Contractor during performance of this Contract, performance of the Contract, and/or compliance with Contract procedures, or should Contractor otherwise seek extra time or compensation FOR ANY REASON WHATSOEVER, then Contractor shall first follow procedures set forth in the Contract (including but not limited to other Articles of this Document 00 7200 and Section 01 2600.) If a dispute remains, then Contractor shall give written notice to City that expressly invokes this Article 12. City shall decide the issue in writing within 15 calendar days; and City's written decision shall be final and conclusive. If Contractor disagrees with City's decision, or if Contractor contends that City failed to provide a decision timely, then Contractor's SOLE AND EXCLUSIVE REMEDY is to promptly file a written claim setting forth Contractor's position as required herein.

12.02 Form And Contents Of Claim

- A. Contractor's written claim must identify itself as a "Claim" under this Article 12 and must include the following: (1) a narrative of pertinent events; (2) citation to contract provisions; (3) theory of entitlement; (4) complete pricing of all cost impacts; (5) a time impact analysis of all time delays that shows actual time impact on the critical path; (6) documentation supporting items 1 through 5; a verification under penalty of perjury of the claim's accuracy. The Claim shall be submitted to City within thirty (30) calendar days of receiving City's written decision, or the date Contractor contends such decision was due, and shall be priced like a change order according to Section 01 2600, and must be updated monthly as to cost and entitlement if a continuing claim. Routine contract materials, for example, correspondence, RFI, Change Order requests, or payment requests shall not constitute a claim. Contractor shall bear all costs incurred in the preparation and submission of a claim.

12.03 Administration During/After Claim Submission

- A. City may render a final determination based on the Claim or may in its discretion conduct an administrative hearing on Contractor's claim, in which case Contractor shall appear, participate, answer questions and inquiries, and present any further evidence or analysis requested by City prior to rendering a final determination. Should City take no action on the Claim within 45 calendar days of submission, it shall be deemed denied.
- B. Notwithstanding and pending the resolution of any claim or dispute, Contractor shall diligently prosecute the disputed work to final completion in accordance with City's determination.
- C. After their submission, claims less than \$375,000 shall also be subject to the Local Agency Disputes Act.

12.04 Compliance

- A. The provisions of this Article 12 constitute a non-judicial claim settlement procedure that, pursuant to Section 930.2 of the California Government Code, shall constitute a condition precedent to submission of a valid Government Code Claim under the California Government Code. Contractor shall bear all costs incurred in the preparation, submission and administration of a claim. Any claims presented in accordance with the Government Code must affirmatively indicate Contractor's prior compliance with the claims procedure herein and the previous dispositions under Paragraph 12.3 above of the claims asserted. Pursuant to Government Code Section 930.2, the one-year period in Government Code section 911.2 shall be reduced to 150 calendar days from either accrual of the cause of action, substantial completion or termination of the contract, whichever occurs first; in all other respects, the Government Code shall apply unchanged.
- B. Failure to submit and administer claims as required in Article 12 shall waive Contractor's right to claim on any specific issues not included in a timely submitted claim. Claim(s) or issue(s) not raised in a timely protest and timely claim submitted under this Article 12 may not be asserted in any subsequent litigation, Government Code Claim, or legal action.
- C. City shall not be deemed to waive any provision under this Article 12, if at City's sole discretion, a

claim is administered in a manner not in accord with this Article 12. Waivers or modifications of this Article 12 may only be made a signed change order approved as to form by legal counsel for both City and Contractor; oral or implied modifications shall be ineffective.

ARTICLE 13 – UNDERGROUND CONDITIONS

13.01 Contractor To Locate Underground Facilities.

- A. During construction, Contractor shall comply with Government Code Sections 4216 to 4216.9, and in particular Section 4216.2 which provides, in part: “Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center at least two working days, but no more than 14 calendar days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator, and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated. The regional notification center shall provide an inquiry identification number to the person who contacts the center and shall notify any member, if known, who has a subsurface installation in the area of the proposed excavation.”
- B. Contractor shall contact USA, and schedule the Work to allow ample time for the center to notify its members and, if necessary, for any member to field locate and mark its facilities. Contractor is charged with knowledge of all subsurface conditions reflected in USA records. Prior to commencing excavation or trenching work, Contractor shall provide City with copies of all USA records secured by Contractor. Contractor shall advise City of any conflict between information provided in Document 00 3132 (Geotechnical Data and Existing Conditions), the Drawings and that provided by USA records. Contractor’s excavation shall be subject to and comply with the Contract Documents.
- C. Contractor shall also investigate the existence of existing service laterals, appurtenances or other types of utilities, indicated by the presence of an underground transmission main or other visible facilities, such as buildings, new asphalt, meters and junction boxes, on or adjacent to the Site, even if not shown or indicated in Document 00 3132 (Geotechnical Data and Existing Conditions), the Drawings or that provided by USA records. Contractor shall immediately secure all such available information and notify City and the utility owner, in writing, of its discovery.

13.02 Contractor To Protect Underground Facilities.

- A. At all times during construction, all operating Underground Facilities shall remain in operation, unless the Contract Documents expressly indicate otherwise. Contractor shall maintain such Underground Facilities in service where appropriate; shall repair any damage to them caused by the Work; and shall incorporate them into the Work, including reasonable adjustments to the design location (including minor relocations) of the existing or new installations. Contractor shall take immediate action to restore any in service installations damaged by Contractor’s operations.
- B. Prior to performing Work at the Site, Contractor shall lay out the locations of Underground Facilities that are to remain in service and other significant known underground installations indicated by the Underground Facilities Data. Contractor shall further locate, by carefully excavating with small equipment, potholing and principally by hand, all such utilities or installations that are to remain and that are subject to damage. If additional utilities whose locations are unknown are discovered, Contractor shall immediately report to City for disposition of the same. Additional compensation or extension of time on account of utilities not shown or otherwise brought to Contractor’s attention, including reasonable action taken to protect or repair damage, shall be determined as provided in this Document 00 7200.
- C. If during construction, an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated in the materials supplied by City for bidding or in information on file at USA or otherwise reasonably available to Contractor, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby (and in no event later than seven calendar days), and prior to performing any Work in connection therewith (except in an emergency), identify the owner of such Underground Facility and give written notice to that owner and to City. During such time, Contractor shall be responsible for the

- safety and protection of such Underground Facility.
- D. The cost of all of the following will be included in the Contract Sum and Contractor shall have full responsibility for (a) reviewing and checking all available information and data including, but not limited to, information made available for bidding and information on file at USA; (b) locating all Underground Facilities shown or indicated in the Contract Documents, available information, or indicated by visual observation including, but not limited to, and by way of example only, engaging qualified locating services and all necessary backhoeing and potholing; (c) coordination of the Work with the owners of such Underground Facilities during construction; and (d) the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.
 - E. Consistent with California Government Code §4215, as between City and Contractor, City will be responsible for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Site only if such utilities are not identified in the Contract Documents or information made available for bidding. City will compensate for the cost of locating and repairing damage not due to Contractor's failure to exercise reasonable care, removing and relocating such main or trunk line utility facilities not indicated in the Contract Documents or information made available for bidding with reasonable accuracy, and equipment on the Project necessarily idled during such Work. Contractor shall not be assessed liquidated damages for delay in completion of the Project, when such delay was caused by the failure of City or the utility to provide for removal or relocation of such utility facilities.

13.03 Concealed Or Unknown Conditions

- A. If either of the following conditions is encountered at Site when digging trenches or other excavations that extend deeper than four feet below the surface, Contractor shall give a written Notice of Differing Site Conditions to City promptly before conditions are disturbed, except in an emergency as set forth in this Document 00 7200, and in no event later than seven calendar days after first observance of:
 - 1. Subsurface or Latent physical conditions which differ materially from those indicated in the Contract Documents; or
 - 2. Unknown physical conditions of an unusual nature or which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.
- B. In response to Contractor's Notice of Differing Site Conditions under this Paragraph, City will investigate the identified conditions, and if they differ materially and cause increase or decrease in Contractor's cost of, or time required for, performance of any part of the Work, City will negotiate the appropriate change order following the procedures set forth in the Contract Documents. If City determines that physical conditions at the Site are not Latent or are not materially different from those indicated in Contract Documents or that no change in terms of the Contract Documents is justified, City will so notify Contractor in writing, stating reasons (with Contractor retaining its rights under Article 12 of this Document 00 7200.)
- C. Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time regarding claimed Latent or materially different Site conditions (whether above or below grade) if Contractor knew or should have known of the existence of such conditions at the time Contractor submitted its Bid, failed to give proper notice, or relied upon information, conclusions, opinions or deductions of the kind that the Contract Documents preclude reliance upon.
- D. Regarding Underground Facilities, Contractor shall be allowed an increase in the Contract Sum or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any Underground Facility that is owned and was built by City only where the Underground Facility:
 - 1. Was not shown or indicated in the Contract Documents or in the information supplied for bidding purposes or in information on file at USA; and
 - 2. Contractor did not know of it; and
 - 3. Contractor could not reasonably have been expected to be aware of it or to have anticipated it from the information available. (For example, if surface conditions such as

pavement repairs, valve covers, or other markings, indicate the presence of an Underground Facility, then an increase in the Contract Sum or an extension of the Contract Time will not be due, even if the Underground Facility was not indicated in the Contract Documents, in the information supplied to Contractor for bidding purposes, in information on file at USA, or otherwise reasonably available to Contractor.)

- E. Contractor shall bear the risk that Underground Facilities not owned or built by City may differ in nature or locations shown in information made available by City for bidding purposes, in information on file at USA, or otherwise reasonably available to Contractor. Underground Facilities are inherent in construction involving digging of trenches or other excavations on City's Project, and Contractor is to apply its skill and industry to verify the information available.
- F. Contractor's compensation for claimed Latent or materially different Site conditions shall be limited to the actual, reasonable, incremental increase in cost of that portion of the Work, resulting from the claimed Latent or materially different Site conditions. Such calculation shall take into account the estimated value of that portion of the Work and the actual value of that portion of the Work, using for guidance Contractor's or its subcontractor's bid amount and actual amounts incurred for that portion of the Work and the reasonable expectation (if any) of differing or difficult site conditions in the Work area based on the available records and locale of the Work. For example, if Contractor excavates in an area unexpected, then such costs would be recoverable entirely; while if Contractor extends an existing excavation, then such costs would be recoverable if the resulting excavation costs in that work area exceeded the reasonable expectations therefore.

13.04 Notice Of Hazardous Waste Or Materials Conditions

- A. Contractor shall give a written Notice of Hazardous Materials Condition to City promptly, before any of the following conditions are disturbed (except in an emergency as set forth in this Document 00 7200), and in no event later than 24 hours after first observance of any:
 - 1. Material that Contractor believes may be hazardous waste or hazardous material, as defined in Section 25117 of the Health and Safety Code (including, without limitation, Asbestos, lead, PCBs, petroleum and related hydrocarbons, and radioactive material) that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law ("hazardous material"); or
 - 2. Other material that may present an imminent substantial danger to persons or property exposed thereto in connection with Work at the Site ("other materials").
- B. Except as otherwise provided in the Contract Documents or as provided by applicable law, Contractor shall not be required to give any notice for the disturbance or observation of any such hazardous materials or other materials where such matter is disturbed or observed as part of the scope of Work under the Contract Documents (such as hazardous waste or hazardous material investigation, remediation or disposal activities which are identified as the subject of Work under the Contract Documents), where Contractor complies with all requirements in the Contract Documents and applicable law respecting such materials.
- C. Contractor's Notice of Hazardous Materials Condition shall indicate whether the hazardous materials or other materials were shown or indicated in the Contract Documents to be within the scope of Work, and whether the hazardous materials or other materials were brought to the Site by Contractor, its Subcontractors, suppliers, or anyone else for whom Contractor is responsible.
- D. Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time regarding claimed hazardous waste or materials if:
 - 1. Contractor knew of the existence of such hazardous materials or other materials at the time Contractor submitted its Bid; or
 - 2. Contractor should have known of the existence of such hazardous material or other materials as a result of its having the responsibility to obtain additional or supplementary examinations, investigation, explorations, tests, studies, and data concerning the conditions at or contiguous to the Site prior to submitting its Bid; or
 - 1. Contractor failed to give the written notice within the required timeframe set forth below.
- E. If City determines that conditions involve hazardous materials or other materials and that a

change in Contract Document terms is justified, City will issue either a Request for Proposal or Construction Change Directive under the procedures described in the Contract Documents. If City determines that conditions do not involve hazardous materials or other materials or that no change in Contract Document terms is justified, City will notify Contractor in writing, stating the reasons for its determination.

- F. In addition to the parties' other rights under this Document 00 7200, if Contractor does not agree to resume Work based on a reasonable belief that it is unsafe, or does not agree to resume Work under special conditions, City may order the disputed portion of Work deleted from the Work, or performed by others, or City may invoke its right to terminate Contractor's right to proceed under the Contract Documents in whole or in part, for convenience or for cause as the facts may warrant.
- G. If Contractor does not agree with any City determination of any adjustment in the Contract Sum or Contract Time under this Article, Contractor may make a claim as provided in Article 12 of this Document 00 7200.

ARTICLE 14 – LEGAL AND MISCELLANEOUS

14.01 Laws And Regulations

- A. Contractor shall keep fully informed of and shall comply with all laws, ordinances, regulations and orders of any properly constituted authority affecting the Contract Documents, Work and persons connected with Work, and shall protect and indemnify City and its officers, employees, consultants and agents against any claim or liability, including attorney's fees, arising from or based on violation of law, ordinance, regulation or order, whether by Contractor or by Subcontractors, employees or agents. Authorized persons may at any time enter upon any part of Work to ascertain compliance of all applicable laws, ordinances, regulations and orders.

14.02 Permits And Taxes

- A. Contractor shall procure all permits and licenses applicable to the Work (including environmental matters to the extent applicable); pay all charges and fees, including fees for street opening permits; comply with, implement and acknowledge effectiveness of all permits; initiate and cooperate in securing all required notifications or approvals therefore; and give all notices necessary and incident to due and lawful prosecution of Work, unless otherwise provided herein. City will pay applicable building permits, sanitation and water fees for the completed construction, except as otherwise provided in the Contract Documents. Contractor shall pay all sales and/or use taxes levied on materials, supplies, or equipment purchased and used on or incorporated into Work, and all other taxes properly assessed against equipment or other property used in connection with Work, without any increase in the Contract Sum. Contractor shall make necessary arrangements with proper authorities having jurisdiction over roads, streets, pipelines, navigable waterways, railroads, and other works in advance of operations, even where City may have already obtained permits for the Work.

14.03 Communications And Information Distribution

- A. All communications recognized under the Contract Documents shall be in writing, in the form of a serialized document, by type of communication. For example, RFI's shall be serialized beginning with RFI No. 1; payment applications shall be serialized beginning with Payment Application No. 1, submittals shall be serialized per specification section and transmitted with transmittal sheets beginning with Transmittal No. 1; and correspondence shall be serialized beginning with letter No. 1. Contractor may propose other record management and identification systems or protocols, intended to facilitate orderly transmittal of project information, storage and retrieval of such information, which City will review consistent with these stated objectives, and accept or reject in its sole discretion.
- B. Documents Requiring Signatures. All documents requiring signatures for approval prior to implementing action, as stipulated in other portions of Contract Documents, shall require a manually signed, serialized letter delivered to the other party at its address for notice otherwise specified in the Contract Documents, either personally or by mail.

- C. Electronic data transfer of such correspondence will serve to expedite preliminary concurrence of information, only. Receipt of "hard copy" signature on forms is required prior to implementing action or work as the conditions may require. For example, change orders and authorizations for extra cost, require signatures. A party may acknowledge receipt of PDF copies of required correspondence by e-mail, but in the absence of such acknowledgment, mail or personal delivery is required.
- D. All emails shall be copied to City's and Contractor's Project Representative. City reserves the right to preclude e-mail communication, in whole or in part, as Project needs may require. Communication between City and Contractor shall not be via Twitter, Facebook, or other types of instant text message systems. Any such communications shall be inadmissible for any purpose related to this Contract.

14.04 Suspension Of Work

- A. City may, without cause, order Contractor in writing to suspend, delay or interrupt Work in whole or in part for such period of time as City may determine. An adjustment shall be made for increases in cost of performance of Work of the Contract Documents caused by any such suspension, delay or interruption, calculated using the measures set forth in Section 01 2600 (Modification Procedures). No adjustment shall be made to extent that performance is, was or would have been so suspended, delayed or interrupted by another cause for which Contractor is responsible.

14.05 Termination Of Contract For Cause

- A. The Contractor shall be in default of the Contract Documents and City may terminate the Contractor's right to proceed under the Contract Documents, for cause, in whole or in part, should the Contractor commit a material breach of the Contract Documents and not cure such breach within ten (10) calendar days of the date of notice from City to the Contractor demanding such cure; or, if such breach is curable but not curable within such ten (10) day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for the Contractor to avail itself of a time period in excess of 10 calendar days, the Contractor must provide City within the ten (10) day period with a written plan acceptable to City that demonstrates actual resources, personnel and a schedule to promptly to cure said breach, and then diligently commence and continue such cure according to the written plan).
- B. In the event of termination by City for cause as provided herein, the Contractor shall deliver to City possession of the Work in its then condition, including but not limited to, all designs, engineering, Project records, cost data of all types, plans and specifications and contracts with vendors and subcontractors, all other documentation associated with the Project, and all construction supplies and aids dedicated solely to performing the Work which, in the normal course of construction, would be consumed or only have salvage value at the end of the construction period. The Contractor shall remain fully liable for the failure of any Work completed and materials and equipment provided through the date of such termination to comply with the provisions of the Contract Documents. The provisions of this Section shall not be interpreted to diminish any right which City may have to claim and recover damages for any breach of the Contract Documents or otherwise, but rather, the Contractor shall compensate City for all loss, cost, damage, expense, and/or liability suffered by City as a result of such termination and/or failure to comply with the Contract Documents.
- C. In the event a termination for cause is later determined to have been made wrongfully or without cause, then the termination shall be treated as a termination for convenience, and the Contractor shall have no greater rights than it would have had following a termination for convenience. Any Contractor claim arising out of a termination for cause shall be made in accord with Article 12 herein. No other loss, cost, damage, expense or liability may be claimed, requested or recovered by the Contractor.

14.06 Termination Of Contract For Convenience

- A. City may terminate performance of the Work under the Contract Documents in accordance with this clause in whole, or from time to time in part, whenever City shall determine that termination is

in City's best interest. Termination shall be effected by City delivering to the Contractor notice of termination specifying the extent to which performance of the Work under the Contract Documents is terminated, and the effective date of the termination.

- B. Contractor shall comply strictly with City's direction regarding the effective date of the termination, the extent of the termination, and shall stop work on the date and to the extent specified.
- C. Contractor shall be entitled to a total payment on account of the Contract work so terminated measured by (i.) the actual cost to Contractor of Work actually performed, up to the date of the termination, with profit and overhead limited to twelve percent (12%) of actual cost of work performed, up to but not exceeding the actual contract value of the work completed as measured by the Schedule of Values and Progress Schedule, (ii.) offset by payments made and other contract credits. In connection with any such calculation, however, City shall retain all rights under the Contract Documents, including but not limited to claims, indemnities, or setoffs.
- D. Under no circumstances may Contractor recover legal costs of any nature, nor may Contractor recover costs incurred after the date of the termination.

14.07 Contingent Assignment Of Subcontracts

- A. Contractor hereby assigns to City each Subcontract for a portion of the Work, provided that:
 - 1. The assignment is effective only after City's termination of Contractor's right to proceed under the Contract Documents (or portion thereof relating to that Subcontract) as set forth herein.
 - 2. The assignment is effective only for the Subcontracts which City expressly accepts by notifying the Subcontractor in writing;
 - 3. The assignment is subject to the prior rights, if any, of the Surety, obligated by Document 00 6113.13 (Construction Performance Bond) provided under the Contract Documents, where the Surety exercises its rights to complete the Contract;
 - 4. After the effectiveness of an assignment, Contractor shall, at its sole cost and expense (except as otherwise provided in this Document 00 7200), sign all instruments and take all actions reasonably requested by City to evidence and confirm the effectiveness of the assignment in City; and
 - 5. Nothing in this Paragraph shall modify or limit any of Contractor's obligations to City arising from acts or omissions occurring before the effectiveness of any Subcontract assignment, including but not limited to all defense, indemnity and hold-harmless obligations arising from or related to the assigned Subcontract.

14.08 Remedies And Contract Integration

- A. Subject to Contract Documents provisions regarding Contractor claims, claim review, and claim resolution, and subject to the limitations therein, the exclusive jurisdiction and venue for resolving all claims, counter claims, disputes and other matters in question between City and Contractor arising out of or relating to Contract Documents, any breach thereof or the Project shall be the applicable court of competent jurisdiction located in the State and County where the Project is located. All City remedies provided in the Contract Documents shall be taken and construed as cumulative and not exclusive; that is, in addition to each and every other remedy herein provided; and in all instances City shall have any and all other equitable and legal rights and remedies which it would have according to law.
- B. The Contract Documents, any Contract Modifications and Change Orders, shall represent the entire and integrated agreement between City and Contractor regarding the subject matters hereof and thereof and shall constitute the exclusive statement of the terms of the parties' agreement. The Contract Documents, and any Contract Modifications and Change Orders, shall supersede any and all prior negotiations, representations or agreements, written or oral, express or implied, that relate in any way to the subject matter of the Contract Documents or written Modifications. City and Contractor represent and agree that, except as otherwise expressly provided in the Contract Documents, they are entering into the Contract Documents and any subsequent written Modification in sole reliance upon the information set forth or referenced in the Contract Documents or Contract Modifications; the parties are not and will not rely on any other

information, which shall be inadmissible in any proceeding to enforce these documents.

- C. Either party's waiver of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of the Contract Documents at any time shall not in any way affect, limit, modify or waive that party's right thereafter to enforce or compel strict compliance with every term, covenant, condition or other provision hereof, any course of dealing or custom of the trade or oral representations notwithstanding.
- D. Neither acceptance of the whole or any part of Work by City nor any verbal statements on behalf of City or its authorized agents or representatives shall operate as a waiver or modification of any provision of the Contract Documents, or of any power reserved to City herein nor any right to damages provided in the Contract Documents.

14.09 Interpretation.

- A. Should any part, term or provision of this Agreement or any of the Contract Documents, or any document required herein or therein to be executed or delivered, be declared invalid, void or unenforceable, all remaining parts, terms and provisions shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby. If the provisions of any law causing such invalidity, illegality or unenforceability may be waived, they are hereby waived to the end that this Agreement and the Contract Documents may be deemed valid and binding agreements, enforceable in accordance with their terms to the greatest extent permitted by applicable law. In the event any provision not otherwise included in the Contract Documents is required to be included by any applicable law, that provision is deemed included herein by this reference (or, if such provision is required to be included in any particular portion of the Contract Documents, that provision is deemed included in that portion).
- B. Contract Documents shall not be construed to create a contractual relationship of any kind between (1) Project Manager or any City's representative and Contractor; (2) City and/or its Representatives and a Subcontractor, sub-Subcontractor, or supplier of any Project labor, materials, or equipment; or (3) between any persons or entities other than City and Contractor.

14.10 Patents

- A. Fees or claims for any patented invention, article or arrangement that may be used upon or in any manner connected with performance of the Work or any part thereof shall be included in the Bid price for doing the Work. Contractor shall defend, indemnify and hold harmless City and each of its officers, employees, consultants and agents, including, but not limited to, the Board and each City's Representative, from all damages, claims for damages, costs or expenses in law or equity, including attorney's fees, arising from or relating to any claim that any article supplied or to be supplied under the Contract Documents infringes on the patent rights, copyright, trade name, trademark, service mark, trade secret or other intellectual property right of any person or persons or that the person or entity supplying the article does not have a lawful right to sell the same. Such costs or expenses for which Contractor agrees to indemnify and hold harmless the above indemnities include but are not limited to any and all license fees, whether such fees are agreed by any indemnitee or ordered by a court or administrative body of any competent jurisdiction.

14.11 Substitution For Patented And Specified Articles

- A. Except as noted specifically in the instructions to Bidders or in Contract Documents, whenever in Specifications, material or process is designated by patent or proprietary name or by name of manufacturer, such designation shall be deemed to be used for purpose of facilitating description of material and process desired, and shall be deemed to be followed by the words "or Approved Equal" and Contractor may offer any substitute material or process that Contractor considers "equal" in every respect to that so designated and if material or process offered by Contractor is, in opinion of City, Equal in every respect to that so designated, its use will be approved. However, Contractor may utilize this right only by timely submitting Document 00 6325 (Substitution Request Form) as provided in Document 00 2113 (Instructions to Bidders). A substitution will be approved only if it is a true "or equal" item in every aspect of its design and quality, including but not limited to its dimensions, weights, service requirements, durability, functioning, impact on contiguous construction elements, overall schedule and design.

14.12 Interest Of Public Officers

- A. No representative, officer, or employee of City no member of the governing body of the locality in which the Project is situated, no member of the locality in which City was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the Project, during the tenure of the official or for one year thereafter, shall, as principal, agent, attorney or otherwise, be directly or indirectly interested, in the Contract Documents or the proceeds thereof.

14.13 Limit Of Liability

- A. CITY, AND EACH OF ITS OFFICERS, BOARD MEMBERS, EMPLOYEES, CONSULTANTS AND AGENTS INCLUDING, BUT NOT LIMITED TO, PROJECT MANAGER AND EACH OTHER CITY REPRESENTATIVE, SHALL HAVE NO LIABILITY TO CONTRACTOR FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, EXCEPT TO THE LIMITED EXTENT THAT THESE CONTRACT DOCUMENTS OR APPLICABLE PUBLIC CONTRACTING STATUTES MAY SPECIFY THEIR RECOVERY.

ARTICLE 15 – WORKING CONDITIONS AND PREVAILING WAGES**15.01 Use Of Site/Sanitary Rules**

- A. All portions of the Work shall be maintained at all times in neat, clean and sanitary condition. Contractor shall furnish toilets for use of Contractor's and Subcontractors' employees on the Site where needed, and their use shall be strictly enforced. All toilets shall be properly secluded from public observation, and shall be located, constructed and maintained subject to City's approval.
- B. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Site and land areas identified in and permitted by Contract Documents and other land and areas permitted by applicable laws and regulations, rights of way, permits and easements or as designated by City, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, any improvement located thereon, or to City or occupant thereof resulting from the performance of Work.
- C. During the progress of the Work, Contractor shall keep the Site and the Project free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, Contractor shall clean the site, remove all waste materials, rubbish and debris from and about the Site as well as all tools, appliances, construction equipment and machinery and surplus materials. Contractor shall leave the premises clean and ready for occupancy by City at Substantial Completion of Work. Contractor shall restore to original condition all property not designated for alteration by Contract Documents.
- D. Contractor shall not load nor permit any part of any structure or pavement to be loaded in any manner that will endanger the structure or pavement, nor shall Contractor subject any part of Work or adjacent property to stresses or pressures that will endanger it. Contractor shall conduct all necessary existing conditions investigation regarding structural, mechanical, electrical or any other system existing, shall perform Work consistent with such existing conditions, and shall have full responsibility for insufficiencies or damage resulting from insufficiencies of existing systems, equipment or structures to accommodate performing the Work.

15.02 Protection Of Work, Persons, And Property

- A. Contractor shall be responsible for initiating, maintaining and supervising all safety and site security precautions and programs in connection with Work, and shall develop and implement a site security and safety plan throughout construction. Contractor shall comply with all safety requirements specified in any safety program established by City, or required by state, federal or local laws and ordinances. Contractor shall be responsible for all theft or damage to Work, property or structures, and all injuries to persons, either on the Site or constituting the Work (e.g., materials in transit), arising from the performance of Work of the Contract Documents from a cause.

- B. Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property.
- C. Contractor shall remedy all damage, injury or loss to any property referred to above in this Article, caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, supplier, or any other person or organization directly or indirectly employed by any of them to perform or furnish any Work or anyone for whose acts any of them may be liable. Contractor's duties and responsibility for safety and for protection of Work shall continue until such time as all the Work is completed and Final Acceptance of the Work. City and its agents do not assume any responsibility for collecting any indemnity from any person or persons causing damage to Contractor's Work.
- D. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
- E. City may, at its option, retain such moneys due under the Contract Documents as City deems necessary until any and all suits or claims against Contractor for injury to persons or property shall be settled and City receives satisfactory evidence to that effect.
- F. Work within the right-of-way lines of the city and/or City and/or State shall be done in accordance with the standards and specifications of the controlling agency. Permit for such work shall be obtained and paid for by the Contractor before executing the work within such right-of-ways.

15.03 Responsibility For Safety And Health

- A. Contractor shall ensure that its and each tier of Subcontractors' employees, agents and invitees comply with applicable health and safety laws while at the Site. These laws include the Occupational Safety and Health Act of 1970 and rules and regulations issued pursuant thereto, and City's safety regulations as amended from time to time. Contractor shall comply with all City directions regarding protective clothing and gear.
- B. Contractor shall be fully responsible for the safety of its and its Subcontractors' employees, agents and invitees on the Site. Contractor shall notify City, in writing, of the existence of hazardous conditions, property or equipment at the Site that are not under Contractor's control. Contractor shall be responsible for taking all the necessary precautions against injury to persons or damage to the property of Contractor, Subcontractors or persons from recognized hazards until the responsible party corrects the hazard.
- C. Contractor shall confine all persons acting on its or its Subcontractors' behalf to that portion of the Site where Work under the Contract Documents is to be performed, City-designated routes for ingress and egress thereto, and any other City-designated area. Except those routes for ingress and egress over which Contractor has no right of control, within such areas, Contractor shall provide safe means of access to all places at which persons may at any time have occasion to be present.

15.04 Emergencies

- A. In emergencies affecting the safety or protection of persons or Work or property at the Site or adjacent thereto, Contractor, without special instruction or authorization from City, is obligated to act to prevent threat and damage, injury or loss, until directed otherwise by City. Contractor shall give City prompt written notice if Contractor believes that any significant changes in Work or variations from Contract Documents have been caused thereby. If City determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Change Order or Construction Change Directive will be issued to document the consequences of such action.

15.05 Use Of Roadways And Walkways

- A. Contractor shall not unnecessarily interfere with use of any roadway, walkway or other facility for

vehicular or pedestrian traffic. Before beginning any interference and only with City's prior concurrence, Contractor may provide detour or temporary bridge for traffic to pass around or over the interference, which Contractor shall maintain in satisfactory condition as long as interference continues. Unless otherwise provided in the Contract Documents, Contractor shall bear the cost of these temporary facilities.

15.06 Nondiscrimination

- A. No person or entity shall discriminate in the employment of persons upon public works because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sexual preference, or gender of such persons, except as provided in Section 12940 of the California Government Code. Every contractor for public works violating the provisions of Section 1735 of the California Labor Code is subject to all the penalties imposed for a violation of Chapter 1, Part 7, Division 2 of the California Labor Code.

15.07 Prevailing Wages And Working Hours

- A. Contractor shall pay to persons performing labor in and about Work provided for in the Contract Documents an amount equal to or more than the general prevailing rate of per diem wages for (1) work of a similar character in the locality in which the Work is performed and (2) legal holiday and overtime work in said locality. The per diem wages shall be an amount equal to or more than the stipulated rates contained in a schedule that has been ascertained and determined by the Director of the State Department of Industrial Relations and City to be the general prevailing rate of per diem wages for each craft or type of workman or mechanic needed to execute this Contract. Contractor shall also cause a copy of this determination of the prevailing rate of per diem wages to be posted at each Site.
- B. Contractor shall forfeit, as a penalty to City, Fifty Dollars (\$50.00) for each laborer, workman, or mechanic employed in performing labor in and about the Work provided for in the Contract Documents for each Day, or portion thereof, that such laborer, workman or mechanic is paid less than the said stipulated rates for any Work done under the Contract Documents by him or her or by any Subcontractor under him or her, in violation of Articles 1 and 2 of Chapter 1 of Part 7 of Division II of the California Labor Code. The sums and amounts which shall be forfeited pursuant to this Paragraph and the terms of the California Labor Code shall be withheld and retained from payments due to Contractor under the Contract Documents, pursuant to this Document 00 7200 and the California Labor Code, but no sum shall be so withheld, retained or forfeited except from the final payment without a full investigation by either the State Department of Industrial Relations or by City. The Labor Commissioner pursuant to California Labor Code §1775 shall determine the final amount of forfeiture.
- C. Contractor shall insert in every subcontract or other arrangement which Contractor may make for performance of Work or labor on Work provided for in the Contract, provision that Subcontractor shall pay persons performing labor or rendering service under subcontract or other arrangement not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed in the California Labor Code.
- D. Contractor stipulates that it shall comply with all applicable wage and hour laws, including without limitation, California Labor Code §§ 1776 and 1810-1815. Failure to so comply shall constitute a default under this Contract.
- E. Contractor and its Subcontractors shall be responsible for compliance with Labor Code §§ 1810-1815.
 - 1. Eight hours of labor performed in execution of the Contract constitutes a legal day's work. The time of service of any workman employed on the Project is limited and restricted to 8 hours during any one calendar day, and 40 hours during any one calendar week.
 - 2. Contractor and its Subcontractors shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by him or her in connection with the Project. The record shall be kept open at all reasonable hours to the inspection City and to the Division of Labor Standards Enforcement.

3. Contractor or its Subcontractors shall, as a penalty to City, forfeit twenty-five dollars (\$25) for each worker employed in the execution of the Contract Documents by the respective Contractor or Subcontractor for each calendar day during which the worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Labor Code §§ 1810-1815.
 4. Work performed on the Project by employees of Contractor or its Subcontractors in excess of 8 hours per day, and 40 hours during any one week, shall be permitted upon compensation for all hours worked in excess of 8 hours per day at not less than 1 1/2 times the basic rate of pay.
- F. Contractor and its Subcontractors shall be responsible for compliance with Labor Code Section 1776.
1. Contractor and Subcontractors must keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the Work of the Contract Documents. Each payroll record shall contain or be verified by a written declaration as required by Labor Code Section 1776.
 2. The payroll records enumerated above must be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor as required by Labor Code Section 1776.
 - a. Contractor shall inform City of the location of records enumerated above, including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.
 - b. Contractor or Subcontractor has 10 calendar days in which to comply subsequent to receipt of a written notice requesting the records enumerated above. In the event that the Contractor or Subcontractor fails to comply with the ten-day period, he or she shall, as a penalty to City on whose behalf the contract is made or awarded, forfeit \$25.00 for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. Contractor is not subject to a penalty assessment pursuant to this Paragraph due to the failure of a Subcontractor to comply with this Paragraph.
 3. Contractor shall also deliver certified payrolls to City with each Application for Payment as set forth above in this Document 00 7200 (General Conditions).

15.08 Environmental Controls

- A. Contractor shall comply with all rules, regulations, ordinances, and statutes that apply to any Work performed under the Contract Documents including, without limitation, any toxic, water, stormwater management and soil pollution controls and air pollution controls specified in California Government Code §11017. Contractor shall be responsible for insuring that Contractor's Employees, Subcontractors, and the public are protected from exposure to airborne hazards or contaminated water, soil, or other toxic materials used during or generated by activities on the Site or associated with the Project.

15.09 Shoring Safety Plan

- A. Any conflict between this Paragraph and Division 2 of the Specifications shall be resolved in favor of the most stringent requirement.
- B. At least five calendar days in advance of any excavation five feet or more in depth, Contractor shall submit to City a detailed plan showing the shoring, bracing and sloping design (including calculations) and other provisions to be made for worker protection from the hazard of caving ground during the excavation, as required by California Labor Code §6705. A civil or structural engineer registered in California shall prepare and sign any plan that varies from the shoring system standards established by the State Construction Safety Orders.

- C. During the course of Work, Contractor shall be responsible for determining where sloping, shoring, and/or bracing is necessary and the adequacy of the design, installation, and maintenance of all shoring and bracing for all excavation, including any excavation less than five feet in depth. Contractor will be solely responsible for any damage or injuries that may result from excavating or trenching. City's acceptance of any drawings showing the shoring or bracing design or Work schedule shall not relieve Contractor of its responsibilities under this Paragraph.
- D. Appoint a qualified supervisory employee who shall be responsible to determine the sloping or shoring system to be used depending on local soil type, water table, stratification, depth, etc.

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DOCUMENT 00 7201

SUPPLEMENTAL GENERAL CONDITIONS

N/A

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DOCUMENT 00 7316

SUPPLEMENTARY CONDITIONS – INSURANCE AND INDEMNIFICATION

ARTICLE 1 – INSURANCE

1.01 At or before the date specified in Document 00 2113 (Instructions to Bidders), Contractor shall furnish to City of Berkeley (“City”) satisfactory proof that Contractor has taken out for the entire period covered by the Contract the following classes of insurance in the form and with limits and deductibles specified below, unless otherwise specified in Contract Documents:

- A. Comprehensive General Liability Insurance covering claims for personal injury, bodily injury and property damage arising out of the Work and in a form providing coverage not less than that of a Standard Commercial General Liability Insurance policy (“Occurrence Form”). Such insurance shall provide for all operations and include independent contractors, products liability, completed operations for one year after Final Completion and acceptance of the final payment for the Work, contractual liability, and coverage for explosion, collapse, and underground hazards. The limits of such insurance shall not be coverage of less than **[\$2,000,000]** each occurrence, **[\$2,000,000]** general aggregate limit, and **[\$2,000,000]** aggregate for products and completed operations, with defense costs payable in addition to policy limits. The policies shall be endorsed to provide Broad Form Property Damage Coverage.
- B. Comprehensive Automobile Liability Insurance covering all owned, non-owned, and hired vehicles. Such insurance shall provide coverage not less than the standard Comprehensive Automobile Liability policy with limits not less than **[\$2,000,000]** each occurrence Bodily Injury, and **[\$2,000,000]** each occurrence Property Damage.
- C. All-Risk Course of Construction Insurance including damage to property owned by City, Contractor or third parties caused by fire. Insurance shall be in the amount of 100 percent of the completed value of the Work to be performed under this Contract. Deductible shall not exceed **[\$10,000]**. Each loss shall be borne by Contractor.
- D. Workers’ Compensation Insurance for all persons whom the Contractor may employ in carrying out Work contemplated under Contract Documents, in accordance with the Act of Legislature of State of California, known as “Workers’ Compensation Insurance and Safety Act,” approved May 26, 1913, and all acts amendatory or supplemental thereto, in the statutory amount. Workers’ Compensation Insurance is **[\$1,000,000]** each accident, with defense cost payable in addition to policy limits.
- E. **[Option]** Environmental Impairment Liability Insurance covering bodily injury and property damage utilizing an occurrence policy form, in an amount no less than **[\$1,000,000]** combined single limit for each occurrence, subject to a **[\$1,000,000]** aggregate applicable to each job, with defense costs payable in addition to policy limits. The minimum deductible or self-insured retention permissible is **[\$25,000]** each occurrence.

1.02 All policies of insurance shall be placed with insurers acceptable to City. The insurance underwriter(s) for all insurance policies except Workers’ Compensation shall have an A. M. Best Company rating of A-, VIII or better, unless otherwise specified in Contract Documents. Required minimum amounts of insurance may be increased should conditions of Work, in opinion of City, warrant such increase. Contractor shall increase required insurance amounts upon direction by City.

1.03 Required Endorsements: The policies required under Document 00 7200 (General Conditions) and this Document 00 7316 shall be endorsed as follows:

- A. City of Berkeley, its officers, agents, volunteers, consultants, and employees shall be named as additional insureds, but only with respect to liability arising out of the activities of the named insured, and there shall be a waiver of subrogation as to each named and additional insured.
- B. Each such policy shall apply separately to each insured against whom claim is made or suit is

- brought, except with respect to the limit of the insurance company's liability required hereunder. Should any of the policies identified herein contain a "cross-suits" exclusion, such exclusion must not apply to any additional insureds.
- C. Written notice of cancellation or of any limits reduction change in said policy shall be mailed to the City thirty (30) calendar days in advance of the effective date thereof, and ten (10) calendar days written notice to the same in advance of payment of any insurance claims under such policies to any person, firm or entity.
 - D. Insurance shall be primary insurance and no other insurance or self-insured retention carried or held by any named or additional insureds shall be called upon to contribute to a loss covered by insurance for the named insured.
- 1.04** Written notice of cancellation, non-renewal, or reduction in coverage of any policy shall be mailed to City (Attention: Project Manager and the Construction Manager) at the address listed in Document 00 5200 (Agreement), 30 calendar days in advance of the effective date of the cancellation, non-renewal, or reduction in coverage. Written notice of cancellation for non-payment shall be mailed within 10 calendar days of cancellation.
- 1.05** Certificates of insurance and endorsements shall have clearly typed thereon City Specification Number, and Title of Project of Contract Documents. Contractor shall maintain insurance in full force and effect during entire period of performance of Contract Documents.
- 1.06** Contractor shall keep insurance in force during warranty and guarantee periods, except that Contractor may discontinue All-Risk Course of Construction Insurance after Final Payment. At time of making application for extension of time, and during all periods exceeding the Contract Time resulting from any cause, Contractor shall submit evidence that insurance policies will be in effect during requested additional period of time. Upon City's request, Contractor shall submit to City, within 30 calendar days, copies of the actual insurance policies or renewals or replacements.
- 1.07** Contractor shall pay all insurance premiums, including any charges for required waivers of subrogation or the endorsement of additional insureds. If Contractor fails to maintain insurance, City may take out comparable insurance, and deduct and retain amount of premium from any sums due Contractor under Contract Documents.
- 1.08** If injury occurs to any employee of Contractor, Subcontractor or sub-subcontractor for which the employee, or the employee's dependents in the event of employee's death, is entitled to compensation from City under provisions of the Workers' Compensation Insurance and Safety Act, as amended, or for which compensation is claimed from City, City may retain out of sums due Contractor under Contract Documents, amount sufficient to cover such compensation, as fixed by the Act, as amended, until such compensation is paid, or until it is determined that no compensation is due. If City is compelled to pay compensation, City may, in its discretion, either deduct and retain from the Contract Sum the amount so paid, or require Contractor to reimburse City.
- 1.09** Nothing herein shall be construed as limiting in any way the extent to which Contractor or any Subcontractor may be held responsible for payment of damages resulting from their operations.
- 1.10** All Subcontractors shall maintain the same insurance required to be maintained by Contractor with respect to their portions of the Work unless otherwise indicated in Contract Documents, and Contractor shall cause the Subcontractors to furnish proof thereof to City within ten calendar days of City's request.
- 1.11** The following provisions apply to any licensed professional engaged by Contractor to perform portions of the Work ("Professional").
- A. Each Professional shall maintain the following insurance, unless otherwise specified in Contract Documents:
 - B. Professional Liability Insurance, insuring against professional errors and omissions arising from Professional's Work on the Project, in an amount not less than **[\$2,000,000]** combined single limit for each occurrence. If Professional cannot provide an occurrence policy, Professional shall

provide insurance covering claims made as a result of performance of Work on this Project and shall maintain such insurance in effect for not less than two years following Final Completion of the Project.

- C. Professional shall satisfy all other provisions of this Document 00 7316 relating to that insurance, including without limitation providing required insurance certificates (containing the required endorsements) before commencing its Work on the Project.

ARTICLE 2 – RESPONSIBILITY OF CONTRACTOR AND INDEMNIFICATION

- 2.01** City and each of its officers, employees, consultants and agents including, but not limited to, the Board, Project Manager and Construction Manager and each City's Representative, shall not be liable or accountable in any manner for loss or damage that may happen to any part of the Work; loss or damage to materials or other things used or employed in performing the Work; injury, sickness, disease, or death of any person; or damage to property resulting from any cause whatsoever except their sole negligence, willful misconduct or active negligence, attributable to performance or character of the Work, and Contractor releases all of the foregoing persons and entities from any and all such claims.
- 2.02** To the furthest extent permitted by law (including without limitation California Civil Code §2782), Contractor shall assume defense of, and indemnify and hold harmless, City and each of its officers, employees, consultants and agents, including but not limited to the Board, Project Manager and Construction Manager and each City's Representative, from claims, suits, actions, losses and liability of every kind, nature and description, including but not limited to claims and fines of regulatory agencies and attorney's fees and consultant's fees, directly or indirectly arising out of, connected with or resulting from performance of the Work, failure to perform the Work, or condition of the Work which is caused in whole or part by any act or omission of Contractor, Subcontractors, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, resulting from any cause whatsoever except their sole negligence, willful misconduct or active negligence.
- 2.03** With respect to third-party claims against Contractor, Contractor waives any and all rights to any type of express or implied indemnity against City and each of its officers, employees, consultants and agents including, but not limited to City, the Board, Project Manager and Construction Manager and each City's Representative. City shall provide timely notice to Contractor of any third-party claim relating to the Contract Documents, in accordance with Section 9201 of the California Public Contract Code.
- 2.04** Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of Contractor, its Subcontractors of any tier, or the officers or agents of any of them.
- 2.05** To the furthest extent permitted by law (including, without limitation, Civil Code §2782), the indemnities, releases of liability and limitations of liability, claims procedures, and limitations of remedy expressed throughout Contract Documents shall apply even in the event of breach of Contract, negligence (active or passive), fault or strict liability of the party(ies) indemnified, released, or limited in liability, and shall survive the termination, rescission, breach, abandonment, or completion of the Work or the terms of the Contract Documents. If Contractor fails to perform any of these defense or indemnity obligations, City may in its discretion back charge Contractor for City's costs and damages resulting therefrom and withhold such sums from progress payments or other Contract moneys which may become due.
- 2.06** The indemnities in the Contract Documents shall not apply to any indemnified party to the extent of its sole negligence or willful misconduct; nor shall they apply to City or other indemnified party to the extent of its active negligence.

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DOCUMENT 00 7317**SUPPLEMENTARY CONDITIONS – CITY OF BERKELEY CONTRACTING POLICIES****ARTICLE 1 – GENERAL****1.01 DESCRIPTION**

- A. This document includes requirements which supplement the sections of the General Conditions.

1.02 PROHIBITED DISCRIMINATION. The following paragraphs shall be added to the General Conditions as a new Article 16.A, and, with the additions set forth in paragraphs 1.03 through 1.08, below, shall constitute a new Section 16 of Document 00 7200, General Conditions, entitled “16: City of Berkeley Contracting Policies”.

“16. A PROHIBITED DISCRIMINATION: During prosecution of the Work to be done under the Contract, Contractor shall comply with the provisions of Berkeley Municipal Code (“B.M.C.”) Chapter 13.26, including, but not limited to, the following:

1. Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, ancestry, national origin, age (over 40), sex, pregnancy, marital status, disability, sexual orientation or AIDS.
2. Contractor shall permit the City access to records of employment, employment advertisements, application forms, EEO-1 forms, affirmative action plans and any other documents which, in the opinion of the City, are necessary to monitor compliance with this non-discrimination provision. In addition, Contractor shall submit forms supplied by the City to monitor this non-discrimination provision.”

1.03 CONFLICTS OF INTEREST PROHIBITED. The following paragraphs shall be added to Document 00 7200, General Conditions, as a new Section:

“16. B CONFLICTS OF INTEREST PROHIBITED:

1. In accordance with Government Code section 1090, Berkeley City Charter section 36 and B.M.C. Chapter 3.64, neither Contractor nor any employee, officer, director, partner or member of Contractor or immediate family member of any of the preceding, shall have served as an elected officer, an employee, or a City board, committee or commission member, who has directly or indirectly influenced the making of the Agreement.
2. In accordance with Government Code section 1090 and the Political Reform Act, Government Code section 87100 *et seq.*, no person who is a director, officer, partner, trustee, employee or consultant of the Contractor, or immediate family member of any of the preceding, shall make or participate in a decision made by the City or a City board, commission or committee, if it is reasonably foreseeable that the decision will have a material effect on any source of income, investment or interest in real property of that person or Contractor.
 - a. Interpretation of this section shall be governed by the definitions and provisions used in the Political Reform Act, Government Code section 87100 *et seq.*, its implementing regulations, manuals and codes, Government Code section 1090, Berkeley City Charter section 36 and B.M.C. Chapter 3.64.”

- 1.04** NUCLEAR FREE BERKELEY ORDINANCE. The following paragraphs shall be added to Document 00 7200, General Conditions, as a new Section:

“16. C NUCLEAR FREE BERKELEY ORDINANCE:

1. Contractor agrees to comply with B.M.C. Chapter 12.90, the Nuclear Free Berkeley Act, as amended from time to time.”

- 1.05** CONTRACTUAL RELATIONS WITH PROHIBITED ENTITIES. The following paragraphs shall be added to Document 00 7200, General Conditions, as a new Section:

“16. D CONTRACTUAL RELATIONS WITH PROHIBITED ENTITIES

1. OPPRESSIVE STATES

- a. In accordance with Resolution No. 59,853-N.S. (Appendix 00812-A), Contractor certifies that it has no contractual relations with, and agrees during the term of this agreement to forego contractual relations to provide personal services to, the following entities:
 1. The governing regime in any Oppressive State.
 2. Any business or corporation organized under the authority of the governing regime of any Oppressive State.
 3. Any individual, firm, partnership, corporation, association, or any other commercial organization, and including parent-entities and wholly-owned subsidiaries (to the extent that their operations are related to the purpose of its contract with the City), for the express purpose of assisting in business operations or trading with any public or private entity located in any Oppressive State.
- b. Appendix A to Resolution No. 59,853-N.S., and Resolution No. 60,382-N.S. and 70,606-N.S. designates the following as Oppressive States for the purposes of this Contract:
 1. Tibet Autonomous Region and the provinces of Aho, Kham, and U-Tsang; and Burma (Myanmar)
- c. Contractor’s failure to comply with this section shall constitute a default of this Contract and City may terminate the Contractor’s right to proceed with the Work pursuant to Document 00 7200, General Conditions, Article 14.05.
 1. In the event that the City terminates Contractor due to a default under this provision, City may deem Contractor a non-responsible bidder for five (5) years from the date this Contract is terminated.”

- 1.06** REQUIRED AND PROHIBITED WORK MATERIALS. The following paragraphs are added to Document 00 7200, General Conditions, as a new Section:

“16. E REQUIRED AND PROHIBITED WORK MATERIALS

1. RECYCLED PAPER

- a. If Contractor is required by this Agreement to prepare a written report or study, Contractor shall use recycled paper for said report or study when such paper is available at a cost of not more than ten percent more than the cost of virgin paper, and when such paper is available at the time it is needed. For the purposes of this Agreement, recycled paper is paper that contains at least 50% recycled product. If recycled paper is not available, Contractor shall use white paper. Written reports or studies prepared under this Agreement shall be printed on both sides of the page whenever practical.

TROPICAL HARDWOODS

- a. Contractor shall comply with the terms of Resolution No. 58,291-N.S. (Appendix 00812-B) prohibiting the use of any tropical hardwood or wood product, including, but not limited to, those enumerated in Resolution No. 58,291-N.S. Contractor must submit, with its bid, a statement Tropical Hardwood Disclosure form.
- b. Except as expressly permitted by the application of Sections 3.B and 4.B. of Resolution No. 58,291-N.S., Contractor shall not provide any items to the City in performance of this contract which are tropical hardwoods or tropical wood products.
- c. Contractor's failure to comply with this section shall constitute a default of this Agreement and Contractor agrees that City may take any of the following actions:
 1. terminate the Contractor's right to proceed with the Work pursuant to Document 00 7200, General Conditions, Article 14.05;
 2. withhold funds due the Contractor under any contract with the City;
 3. order revision of the Contract Documents based upon a material breach of Contract Documents provisions or pertaining to representations made in bidding, execution or performance of the Contract Documents;
 4. disqualify the Contractor from eligibility for providing commodities or services to the City for a period not to exceed five (5) years, with a right to review and reconsideration by the City after two (2) years upon a showing of corrective action, indicating violations are not likely to recur.
- d. Notwithstanding Article 4 of the Agreement, Contractor acknowledges and agrees that its failure to comply with this requirement justifies the imposition of liquidated damages in an amount equal to Contractor's net profit, or five percent (5%) of the total contract amount, whichever is greater.
 1. Liquidated damages under this provision shall be payable to the City upon demand and may be set off against any monies due to the Contractor from any contract with the City.

3. VIRGIN REDWOOD

- a. Contractor agrees to comply with the City Council's October 29, 1996, directive not to purchase virgin redwood for the prosecution of the work to be done under this Contract and in its place purchase and use:
 1. Redwood that has been previously used or;
 2. Certified, sustainable-harvested redwood as the preferred alternative to virgin

and non-certified redwood, and not pressure-treated lumber of other species as an alternative to redwood.”

4. TREATED WOOD

- a. Contractor shall comply with the terms of Resolution No. 61,724-N.S. (Appendix 00812-E) prohibiting the use of Pentachlorophenol, arsenic and creosote treated wood. No such wood shall be used by the contractor in this or any other City project without the express written consent of the City Council.

1.07 FIRST SOURCE HIRING REQUIREMENT. The following paragraphs shall be added to Document 00 7200, General Conditions, as a new Section if the contract exceeds \$100,000 but is less than \$500,000:

“16. F FIRST SOURCE HIRING REQUIREMENT

1. Contractor, and any subcontractors, shall utilize the City's First Source Construction Program under the terms set forth in the First Source specifications. (Appendix 00812-C).
 - a. Under the First Source program, Contractor must employ, to the extent possible, a work force where no less than twenty-five percent of the work hours are performed by Berkeley residents, and fifty percent of all new hires are Berkeley residents, on a craft-by-craft basis.
 - b. To achieve the goals, Contractor may either:
 1. Utilize the City's First Source referral service, or
 2. Demonstrate a good faith effort to achieve the goals.”

OR

1.07 COMMUNITY WORKFORCE AGREEMENT. The following paragraph shall be added to Document 00700 (General Conditions) as a new Section if the contract exceeds \$500,000.

“16.F COMMUNITY WORKFORCE AGREEMENT

1. Contractor and any subcontractor at any tier shall comply with the City's Community Workforce Agreement set forth in the Appendix 00812 C.
 - a. Under the Community Workforce Agreement, Contractor must sign and comply with the Agreement to be Bound prior to execution of the Contract.
 - b. Subcontractors at any tier must also sign and comply with an Agreement to be Bound prior to execution of their respective subcontracts.
 - c. The signing of an Agreement to be Bound is a condition precedent to entering into any contract for this project.”

1.08 EQUAL BENEFITS ORDINANCE. The following paragraph shall be added to Document 00 7200 (General Conditions) as a new Section:

“16.G EQUAL BENEFITS ORDINANCE:

1. Contractor hereby agrees to comply with the provisions of the Berkeley Equal Benefits Ordinance, B.M.C. Chapter 13.29 (Appendix 00812-D). If Contractor is currently subject to the Berkeley Equal Benefits Ordinance, as indicated by the Equal Benefits Certification form, as contained in Document 00680, Contractor will be required to provide all eligible employees with City mandated equal benefits, as defined in B.M.C. Chapter 13.29, during the term of this contract, as well as comply with the terms enumerated herein.
2. If Contractor is currently or becomes subject to the Berkeley Equal Benefits Ordinance, Contractor agrees to provide the City with all records the City deems necessary to determine compliance with this provision. These records are expressly subject to the auditing terms described in Document 00 7200, General Conditions, Article 8.02.
3. If Contractor fails to comply with the requirements of this Article, City shall have the rights and remedies described in this Section, in addition to any rights and remedies provided by law or equity.
 3. Contractor's failure to comply with this Article shall constitute a material breach of the Contract, upon which City may terminate the Contractor's right to proceed with the Work pursuant to Document 00 7200, General Conditions, Article 14.05. In the event the City terminates the Contractor's right to proceed with the Work due to a default by Contractor under this Article, the City may deem Contractor a non-responsible bidder for not more than five (5) years from the date this Contract is terminated. In addition, at City's sole discretion, Contractor may be responsible for liquidated damages in the amount of \$50.00 per employee per day for each and every instance of violation of this Section. It is mutually understood and agreed that Contractor's failure to provide its employees with equal benefits will result in damages being sustained by City; that the nature and amount of these damages will be extremely difficult and impractical to fix; that the liquidated damages set forth herein is the nearest and most exact measure of damages for such breach that can be fixed at this time; and that the liquidated damage amount is not intended as a penalty or forfeiture for Contractor's breach. City may deduct any assessed liquidated damages from any payments otherwise due Contractor.

1.09 SANCTUARY CITY CONTRACTING: The following paragraph shall be added to Document 00 7200 (General Conditions) as a new Section:

"16. H SANCTUARY CITY ORDINANCE:

1. Contractor hereby agrees to comply with the provisions of the Sanctuary City Contracting Ordinance, B.M.C. Chapter 13.105. In accordance with this Chapter, Contractor agrees not to provide the U.S. Immigration and Customs Enforcement Division of the United States Department of Homeland Security with any Data Broker or Extreme Vetting Services as defined herein:
 - a. "Data Broker" means either of the following:
 - ii. The collection of information, including personal information about consumers, from a wide variety of sources for the purposes of reselling such information to their customers, which include both private-sector business and government agencies;

- iii. The aggregation of data that was collected for another purpose from that for which it is ultimately used.
- b. “Extreme Vetting” means data mining, threat modeling, predictive risk analysis, or other similar services. Extreme Vetting does not include:
 - i. The City’s computer-network health and performance tools;
 - ii. Cybersecurity capabilities, technologies and systems used by the City of Berkeley Department of Information Technology to predict, monitor for, prevent, and protect technology infrastructure and systems owned and operated by the City of Berkeley from potential cybersecurity events and cyber-forensic based investigations and prosecutions of illegal computer based activity.”

SCHEDULE OF APPENDENCES
TO
MODIFICATIONS TO GENERAL CONDITIONS

Schedule of Exhibits: (the following Exhibits are on file at the Berkeley City Clerk's office and will be made available on request to any interested party)

- A. City Council Resolution No. 59,853-N.S. (Re: Oppressive States).
- B. City Council Resolution No. 58,291-N.S. (Re: Tropical Hardwoods).
- C. City Council Resolution No. 61,724-N.S. (Re: Treated Wood).
- D. Berkeley Municipal Code, Chapter 13.29, Equal Benefits Ordinance
- E. Specifications for City's First Source Construction Program, for contracts between \$100,000 and \$500,000.
- E. Community Workforce Agreement and Agreement to be Bound for contract exceeding \$500,000.
- F. Sanctuary City Contracting Ordinance, B.M.C. Chapter 13.105.

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DOCUMENT 00 7319**SUPPLEMENTARY CONDITIONS – HEALTH AND SAFETY REQUIREMENTS;
HAZARDOUS MATERIALS****ARTICLE 1 – GENERAL****1.01 Summary**

- A. This document includes requirements as they apply to location, removal, remediation and disposal of hazardous materials and hazardous waste.

1.02 HAZARDOUS MATERIALS SURVEY

- A. Reference Section 01 1100, Part 1.15 for a list of available documents, including any Hazardous Materials Surveys, if available.
- B. Data regarding the locations of hazardous materials was obtained only for use of City and its consultants, contractors, and tenants for planning and design and are not part of Contract Documents.
- C. Bidders may rely on this data and information for general accuracy regarding the locations of potentially hazardous materials subject of the Work. City does not warrant and makes no representation regarding the completeness or thoroughness of any data or information regarding existing conditions or hazardous materials, including, but not limited to, quantities, characteristics, volumes, or associated structural features. Bidder represents and agrees that in submitting a Bid it is not relying on any such data, information or deductions.
- D. Before submitting a Bid, each Bidder shall be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance or furnishing of Work or which 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 or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of Contract Documents.
- E. Bidders shall advise City in writing during the Bid period of any questions, suppositions, inferences or deductions Bidders may have for City's review and response. City has provided time in the period prior to bidding for Bidder to perform these investigations.
- F. During the Pre-Bid Site Visit(s), City will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid. Bidders must fill all holes and clean up and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies. Such investigations may be performed only under the provisions of Document 00 2113 (Instructions to Bidders) and Document 00 7200 (General Conditions) including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such investigation work. Each Bidder shall supply all equipment required to perform any investigations as each Bidder deems necessary. City has the right to limit the number of pieces of machinery operating at one time due to safety concerns.

1.03 Precedence of Documents

- A. Should any provision or requirement of any Contract Document conflict with another provision or requirement in the Contract Documents on subject matters of hazardous waste abatement, clean up, disposal, or required safety standards or methods, then the most stringent provision or requirement shall control.

1.04 Means and Methods of Construction

- A. Nothing contained in these Contract Documents or inferable therefrom shall be deemed or

construed (1) to make Contractor the agent, servant or employee of City, or (2) to create any partnership, joint venture or other association between City and Contractor.

1.05 Control of the Work

- A. City shall exercise administration of the Contract. The City may employ a consultant to assist. City reserves the right to assign or delegate to this consultant, or any other consultant ("Consultant") any or all of the responsibilities of the Architect/Engineer under the Contract Documents, or alternatively, to act as City's representative.
- B. Contractor shall cooperate with Consultant as directed by City. Consultant's duties may include observing the Contractor's health and safety program and practices, observing the abatement construction activities, observing the contractor's abatement work practices for compliance with the Contract Documents, observing the extent of material removed from each job site, reviewing payment requests, reviewing reports required by governmental or quasi-governmental agencies or the Contract Documents, and providing clearance tests after abatement is completed. No action, omission to act, approval, or failure to advise Contractor as to any matter by Consultant shall in any way relieve the Contractor from its responsibility for the performance of the Work in strict accordance with the Contract Documents and applicable Law.

1.06 Warranty, Guarantee and Inspection of Work.

- A. Contractor represents and warrants that it, its employees and its subcontractors and their employees, shall at all times have the required levels of familiarity with the Site and the Work, training and ability to comply fully with all applicable Law and contract requirements for safe and expeditious performance of the Work, including whatever training is or may be required regarding the activities to be performed (including, but not limited to, all training required to adequately address the actual or potential dangers of contract performance).
- B. Contractor represents and warrants that it, its employees and its subcontractors and their employees, shall at all times have and maintain in good standing any and all certifications and licenses required by applicable federal, state and other governmental and quasi-governmental requirements applicable to the Work.
- C. Contractor represents and warrants that it has studied carefully all requirements of the specifications regarding procedures for demolition, hazardous waste abatement, or safety practices, specified in this contract, and prior submitting its bid, has either (a) verified to its satisfaction that the specified procedures are adequate and sufficient to achieve the results intended by the Contract Documents, or (b) by way of approved "or equal" request or request for clarification and written Addenda, secured changes to the specified procedures sufficient to achieve the results intended by the Contract Documents. Contractor accepts the risk that any specified procedure will result in a completed project in full compliance with the contract requirements.
- D. City reserves the right, in its sole discretion, to conduct air monitoring, earth monitoring, work monitoring, and any other tests (in addition to testing required under the agreement or applicable law), to monitor contract requirements of safe and statutory compliant work methods and (where applicable) safe re-entry level air standards under State and Federal law upon completion of the job, and compliance of the work with periodic and final inspection of public and quasi-public entities having jurisdiction.
- E. Contractor acknowledges that City also has the right to perform, or cause to be performed, various activities and tests including, but not limited to, pre-abatement, during abatement and post-abatement air monitoring, provided that City shall have no obligation to perform said activities and tests, and that a portion of said activities and tests may take place prior to the completion of the Work by Contractor. In the event City elects to perform these activities and tests, Contractor shall afford City ample access to the Site and all areas of the Work as may be necessary for the performance of these activities and tests. Contractor will include the potential impact of these activities for tests by City in the Contract Sum and the Scheduled Completion Date. Contractor shall not be entitled to increases in the contract sum or any damages for delay in the event City elects to perform these activities and tests, provided any delays resulting therefrom are reasonable under the circumstances involved. Notwithstanding City's rights

granted by this paragraph, Contractor shall retain its own industrial hygiene consultant and shall have primary responsibility for collecting samples and perform all applicable, relevant or appropriate activities and tests including, but not limited to, pre-abatement, during abatement and post-abatement air monitoring, required or suggested by the Contract Documents, the Law, or both, and City reserves the right to request documentation of all such activities and tests performed by Contractor relating to the Work.

1.07 RECORDS

- A. Contractor shall obtain and maintain and shall furnish to City on completion of the Work, or at any other time requested by City, all necessary permits, licenses, approvals, authorizations, notifications, training certificates, respirator certificates, reports, correspondence, test results, air monitoring certificates, forms, medical records, medical certificates, notes and photographs of work conditions, approved shipping and disposal facility receipts, manifests, and all other documentation required by the Contract Documents or applicable Law, or both.
- B. Contractor shall provide City with copies of each such document as it is generated and shall, as a condition to final payment, provide City with a complete set of such documents (bound, organized and indexed) at the conclusion of the Work. Contractor shall keep and maintain in retrievable files true and correct copies of all such documents for a period of not less than thirty (30) years after final completion of the Work. City shall have the right to inspect or photocopy these records and, if Contractor should cease business operations, then it shall furnish these records to City.

1.08 Compliance with laws

- A. Contractor represents that it is familiar with shall comply with all laws applicable to the Work or completed Work including, but not limited to, all federal, state and local laws, statutes standards, rules, regulations and ordinances applicable to the Work (collectively, the "Law") relating to:
 - 1. the protection of the public health, welfare and environment;
 - 2. storage, handling or use of asbestos, PCB, lead, petroleum based products or other hazardous materials;
 - 3. the generation, processing, treatment, storage, transport, disposal, destruction or other management of asbestos, PCB, lead, petroleum or hazardous waste materials or other waste materials of any kind; or,
 - 4. the protection of environmentally sensitive areas such as wetlands.
- B. Contractor has the sole responsibility for determining current waste storage, handling, transportation and disposal regulations for the jobsite and for each waste disposal facility. Contractor must comply fully at its sole cost and expense with these regulations and any applicable Law. City, may, but is not obligated to, require submittals with this information for it to review consistent with the Contract Documents.
- C. Contractor shall develop and implement a system acceptable to City to track hazardous waste from the site to disposals, including appropriate "Hazardous Waste Manifests" on the EPA form, so that City may track the volume of waste it put in each landfill and receive from each landfill a certificate of receipt.
- D. Contractor shall provide City with the name and address of each waste disposal facility prior to any disposal, and City shall have the express right to reject any proposed disposal facility. Contractor shall not use any disposal facility to which City has objected. Contractor shall document actual disposal or destruction of waste at a designated facility by completing a disposal certificate or certificate of destruction forwarding the original to the general contractor.

1.09 Permits

- A. Before performing any of the Work, and at such other times as may be required by applicable Law, Contractor shall deliver all requisite notices and obtain the approval of all governmental and quasi-governmental authorities having jurisdiction over the Work. Contractor shall submit evidence satisfactory to City that it and any disposal facility (1) have obtained all required permits, approvals and the like in a timely manner both prior to commencement of the Work and thereafter as and when required by applicable Law, and (2) are in compliance with all such permits,

approvals and the like. For example, before commencing any work in connection with the Work involving asbestos-containing materials or PCB subject to regulation, Contractor agrees to provide the required notice of intent to renovate or demolish to the appropriate state or federal agency having jurisdiction, by certified mail, return receipt requested, or by some other method of transmittal for which a return receipt is obtained, and to send a copy of that notice to City. Contractor shall not conduct any Work involving asbestos-containing materials or PCB unless Contractor has first confirmed that the appropriate agency having jurisdiction is in receipt of the required notification. All permits, licenses, bonds required by governmental or quasi-governmental authorities, fees, deposits, tap fees, offsite easements and asbestos and PCB disposal facilities necessary for the prosecution of the Work shall be procured and paid for by Contractor. Contractor shall give all notices and comply with the Law bearing on the conduct of the Work as drawn and specified. If Contractor observes or reasonably should have observed that Plans and Specifications and other Contract Documents are at variance therewith, it shall be responsible for promptly notifying City in writing of such fact. If Contractor performs any Work contrary to the Law without such notice to City, it shall bear all costs arising therefrom.

- B. In the case of any permits or notices held in City's name or of necessity to be made in City's name, City shall cooperate with Contractor in securing the permit or giving the notice, but the Contractor shall prepare for City's review and execution upon approval, all necessary applications, notices and other materials.

1.10 Indemnification and Termination

- A. To the extent permitted by law, the indemnities and limitations of liability expressed throughout the Contract Documents apply with equal force and effect to any claims or liabilities imposed or existing by virtue of the removal, abatement and disposal of hazardous waste. This includes liabilities connected to the selection and use of a waste disposal facility, personal injury, property damage, loss of use of property, damage to the environment or natural resources, or "disposal" and "release" of materials associated with the Work (as defined in 42 U.S.C. 9601 *et seq*).
- B. Notwithstanding anything in Document 00 7200 to the contrary, City shall have an absolute right to terminate the Contractor's right to proceed with the Work for cause immediately, without ten calendar days notice and without an opportunity to cure, should Contractor knowingly or recklessly commit a material breach of the terms of the Contract Documents or the Law, on any matter involving the exposure of persons or property to hazardous waste. However, if the breach of contract exposing persons or property to hazardous waste is due solely to an ordinary, unintentional and non-reckless failure to exercise reasonable care, then the procedures in Document 00 7200, Article 14.05, shall apply without modification.

1.11 Protection of Work, Persons and Property

- A. Contractor shall perform safe, expeditious and orderly work in accordance with the best practices and the highest standards in the hazardous waste abatement, removal and disposal industry, the Law (as herein defined), and the Contract Documents, including, but not limited to, all responsibilities relating to the preparation and return of waste shipment records, all requirements of the Law, delivering of all requisite notices, and obtaining all necessary governmental and quasi-governmental approvals.

END OF DOCUMENT

DOCUMENT 00 7380**APPRENTICESHIP PROGRAM****ARTICLE 1 – COMPLIANCE REQUIRED**

- 1.01** Contractor and Subcontractors shall comply with the requirements of California Labor Code §§1776, 1777.5, and 1777.6 concerning the employment of apprentices by Contractor or Subcontractors. Willful failure to comply may result in penalties, including loss of the right to Bid on or receive public works contracts.

ARTICLE 2 – CERTIFICATION OF APPROVAL

- 2.01** California Labor Code §1777.5, as amended, requires a Contractor or Subcontractor employing tradespersons in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of a public works project and which administers the apprenticeship program in that trade for a certification of approval. The certificate shall also fix the ratio of apprentices to journeypersons that will be used in performance of the Contract. The ratio of work performed by apprentices to journeypersons in such cases shall not be less than one *hour* of apprentices work for every five *hours* of labor performed by journeypersons (the minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeypersons), except:
- A. When unemployment for the previous three month period in the area exceeds an average of 15 percent;
 - B. When the number of apprentices in training in the area exceeds a ratio of one to five;
 - C. When a trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis state-wide or locally; or
 - 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 journeyperson.

ARTICLE 3 – FUND CONTRIBUTIONS

- 3.01** Contractor is required to make contributions to funds established for administration of apprenticeship programs if Contractor employs registered apprentices or journeypersons in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.

ARTICLE 4 – APPRENTICESHIP STANDARDS

- 4.01** Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of the California Department of Industrial Relations, or from the Division of Apprenticeship Standards and its branch offices.

END OF DOCUMENT

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SDOCUMENT 00 9113

ADDENDA

SPECIFICATION NO. 26-11760-C

CITY OF BERKELEY

FIRE STATION NO. 6 REMODEL

999 CEDAR STREET, BERKELEY, CA 94710

The following Addenda were issued, modifying the Project Manual:

Addendum No. 1, issued on **11/20/25**

Addendum No. 2, issued on **11/25/25**

(Addenda have been incorporated into the conformed Project Manual.)

END OF DOCUMENT

**ADDENDUM 1
November 20, 2025**

The contract documents for Specification No. 26-11760-C for the Fire Station 6 Remodel Project are amended as follows:

- 1-1. Article 1.01, Document 00 1113 – Notice Inviting Bids**
The bid date has changed from December 2, 2025 to **December 4, 2025**. The time will remain at 2:00PM.

- 1-2. The Contract Drawings are revised. Refer to the table below.**

Changes to Drawings:

Drawing No	Date:	Description
A001	11.11.2025	<ul style="list-style-type: none"> • Updated sheet index • removed W15 from Alternative scope
A201	11.11.2025	<ul style="list-style-type: none"> • Added section cuts to coordination to details on A803 • Added information on rainwater leader connection at landing
A302	11.11.2025	<ul style="list-style-type: none"> • Revised window W32.N to have the center lite be one (1) large fixed lite rather than nine (9) divided lites
A800	11.11.2025	<ul style="list-style-type: none"> • Revised window W32.N to have the center lite be one (1) large fixed lite rather than nine (9) divided lites
A800A	11.11.2025	<ul style="list-style-type: none"> • Revised comment key in schedule and notes
A803	11.11.2025	<ul style="list-style-type: none"> • Details were added to cover waterproofing the existing structure and clarify assemblies between new and existing construction
S201	11.11.2025	<ul style="list-style-type: none"> • Sections were updated to reflect existing construction based on record drawings including rigid insulation • Areas requiring field verification for potential shoring were noted

- 1-3. The technical Specifications are revised. Refer to the table below.**

Changes to Specifications:

Spec Section	Description
Table of Contents	Updated to include new specifications sections
07 14 16	Newly added section to cover Fluid Applied Waterproofing and Prefabricated Drainage Composite
07 21 13	Newly added section to cover Rigid Insulation
07 92 00	Modified existing section to cover sealants and joints for the details as revised on A803

- 1-4. Article 4.01, Document 00 5200-2– Liquidated Damage Amounts**

Liquidated damage amounts are \$3,600.

Questions and Responses:

2-1. Does the contractor need to provide restrooms?

City Response: The contractor needs to provide their own restrooms.

2-2. Will there be staging inside property for trailer/material, and work area?

City Response: There will be space to stage approximately two trucks and one storage shed. The staging area is located behind Fire Station 6 and will be accessible from Ninth Street.

**ADDENDUM 2
November 25, 2025**

The contract documents for Specification No. 26-11760-C for the Fire Station 6 Remodel Project are amended as follows:

- 1-1. The front end specifications are revised to include Appendix 1.**
- 1-2. The Contract Drawings are revised. Refer to the table below.**

Drawing No.	Date	Description
A001	11/24/25	Added note to 'ALTERNATES' regarding lead safe practices. Analytical results are available in Appendix 1.
E001	11/24/25	Added note 'CONTRACTOR METHODS OF OPERATION'.

1-1. The technical specifications are revised. Refer to the table below.

Spec No.	Description
08 7100	Added spec 08 7100 'Door Hardware'

Questions and Responses:

2-1. Does the City have any abatement or disposal requirements for lead based or lead containing paint?

City Response: Lead paint will need to be contained and appropriately disposed of for all bid alternates. Refer to sheet A001 and Appendix 1. Workplan forthcoming.

2-2. Will the building be unoccupied for the construction duration? If not, provide work hours, any rule regulation for working with occupants, and phasing requirement.

City Response: The building will be occupied during construction. Ongoing communication with the fire department will be required. A schedule will need to be provided by the contractor such that room occupants can prepare for work to be occurring. Phoenix system, data cabinet, Contech fire station integration, chief's bedroom, captain's bedroom and Wi-Fi will need to be connected and operational at all times. All openings shall be covered at the end of each work day. The kitchen shall remain operational at the end of each work day. Work hours are indicated in the project manual. Refer to E001 'CONTRACTOR METHODS OF OPERATION'.

2-3. On Sheet A201, based on legend there are provision for new partition including fire rated partition. Kindly confirm if there will be new partition.

City Response: There are no new partitions.

2-4. On Sheet A201D, based on legend there are partitions to be removed but none of it exist on the drawing. Kindly confirm if there will be a removal of partition.

City Response: There is no removal of partitions expected

2-5. Will there be staging inside property for trailer/material, and work area?

City Response: There will be space to stage approximately two trucks and one storage shed. The staging area is located behind Fire Station 6 and will be accessible from Ninth Street.

2-6. Please provide foundation details.

City Response: Details are provided on S201 and A803. Refer to the Bid Addendum 1.

2-7. On sheet A201, on Keynotes 11.03 and 11.04 regarding power operated gate call station, please confirm if this is a supply and install scope or just a relocation

City Response: Supply and install scope is expected.

2-8. Will there be an operator on the accessible restroom (Space 111, Door 116)? No door schedule has been provided for that door in the drawings.

City Response: No operator will be provided for door 116.

2-9. Are there concrete specs for this project?

Refer to Sheet S001 for concrete notes and specifications

**ADDENDUM 3
December 2, 2025**

Questions and Responses:

1-1. Are there existing irrigation drawings? If not, is there an irrigation drawing based on the watering needs of the new plantings? Or is the expectation for the contractor to hire a landscape architect to design irrigation for the needs of the new plantings and to include cost into bid?

City Response: Irrigation drawings are not available. We have site photos that show an existing irrigation system. Contractor is to reconfigure the existing irrigation system to cover the new planting strip in front of the platform and the reduced area of planting west of the new vertical platform lift and new stairs.

1-2. Are the bid alternate icons marked in relation to bid alternates 1-8?

City Response: Refer to the bid sheet and drawings for bid alternate details.

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 1100

SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes Summary of Work and Work Restrictions including:

1. Work Covered By Contract Documents
2. Bid Item, Allowances and Alternates
3. Contract Document Organization
4. Maintenance
5. Work Under Other Contracts
6. Future Work
7. Work Sequence
8. Work Days and Hours
9. Shutdown for Discovery of Cultural Resources
10. Cooperation of Contractor and Coordination with Other Work
11. Partial Occupancy/Utilization Requirements
12. Contractor Use of Site
13. Air Quality Standards
14. Construction Staking, Monument Protection and Replacement
15. Protection of Existing Structures and Underground Facilities
16. Permits
17. Actual Damages for Permit Violations
18. Reference Standards
19. Products Ordered in Advance
20. City-Furnished Products

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work comprises of the construction of City's **Fire Station No. 6 Remodel** located at **999 Cedar Street, Berkeley, CA 94710**. The Work includes, without limitation, **window repair and replacement, ADA upgrades, and ancillary work.** Contract Documents fully describe the Work.
- B. The Work of this Contract comprises construction of all the Work indicated, described in the Specifications, or otherwise required by the Contract Documents. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices Bid and no direct or additional payment will be made therefore.
- C. For all Bid items, furnish and install all Work, including connections to existing systems, indicated and described in Specifications and all other Contract Documents. Work and requirements applicable to each individual Bid item, or unit of Work, shall be deemed incorporated into the description of each Bid item (whether Lump Sum or Unit Price). Any Bid item may be deleted from the Work and Contract Sum, in total or in part, prior to or after award of Contract without compensation in any form or adjustment of other Bid items or prices therefore.
- D. Allowance Work shall be done as Change Orders and as specified in Section 01 2600 (Modification Procedures). Identify Allowance Items (See Document 00 4113 [Bid Form]) work on the Progress Schedules and on Applications for Payment. The Amount given on Document 00

4113 (Bid Form) under each Allowance Item is the sum of money set aside for each Allowance Item. These amounts shall be included in the Contract Sum on the Bid Form. If the cost of Work done under any Allowance Item is less than the amount given on the Bid Form under that Allowance Item, the Contract Sum shall be reduced by the difference between the amount given in the Bid Form and the cost of Work actually done.

1.03 BID ITEMS, ALLOWANCES AND ALTERNATES

A. Descriptions of Lump Sum Items (listed by Bid item numbers):

Bid Item 1: All work of the Contract Documents other than work separately provided for under other bid items, i.e. excluding Bid Items 2-9.

B. Descriptions of Unit Price Items and Basis of Measurement for Payment (listed by Bid item numbers):

C. Allowances:

(N/A)

D. Bid Alternates:

Bid Item 2: Bid Alternate 1: Provide W1, W2, W3, and W4 per sheet A800A.

Bid Item 3: Bid Alternate 2: Provide W5 and W6 per sheet A800A.

Bid Item 4: Bid Alternate 3: Provide W7 per sheet A800A.

Bid Item 5: Bid Alternate 4: Provide W8, W9, W10, W11, and W12 per sheet A800A.

Bid Item 6: Bid Alternate 5: Provide W13 and W14 per sheet A800A.

Bid Item 7: Bid Alternate 6: Provide W16 per sheet A800A.

Bid Item 8: Bid Alternate 7: Provide W17, W18, W19, W20, and W21 per sheet A800A.

Bid Item 9: Bid Alternate 8: Provide W22 and W23 per sheet A800A.

1.04 CONTRACT DOCUMENT ORGANIZATION

- A. The Drawings illustrate locations, arrangements, dimensions, and details to determine the general character of the Work. Parts not detailed shall be subject to the Architect's approval. Where reasonably inferable that a Drawing illustrates only part of a given work on a number of items, the remainder shall be deemed repetitious and so construed. Drawings of greater scale take precedence over Drawings of lesser scale. Do not scale documents.
- B. Drawings indicate general arrangement and location of such items as piping, conduit, apparatus, and equipment. Drawings and Specifications are for guidance of the Contractor and exact locations, distances, and levels will be governed by building site and actual building conditions. The Contractor shall make minor changes, as directed, to arrangements or locations shown in order to meet Structural or Architectural conditions.
- C. Specifications describe performances and qualities required of materials and of methods. Items listed under each Section of the Specifications are not necessarily all inclusive. The Contractor shall be responsible for the complete work.
- D. For convenience, Specifications are separated into topical divisions of work, each of which is further related to topical divisions under which it occurs. Such separation shall not be construed as an attempt by the Architect to establish limits of any agreements between the Contractor and his/her subcontractors.
- E. Portions of these Specifications are of abbreviated, simplified type and may include incomplete sentences.
1. Omissions of words or phrases such as "the Contractor shall", "in conformity with", "shall be", "as noted on the Drawings", "in accordance with the details", "a", "the", "all", "any",

and “each” are intentional. Omitted words or phrases shall be supplied by inference.

2. Terms such as “approved”, “or approved equal”, “as directed”, “as required”, “as provided”, “acceptable”, and “satisfactory” mean by or to the Architect or the City.
3. Furnish: The term furnish means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.
4. Install: The term install describes operations at the Project Site, including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar ions.
5. Provide: The term provide means to furnish and install, complete and ready for the intended use.

F. Reference Standards

1. For products specified by association or trade standards, comply with requirements of the standard except where more rigid requirements are specified or are required by applicable codes.
2. The date of the standard is that in effect as of bid date except where specific date is specified

1.05 MAINTENANCE

- A. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices bid and no direct or additional payment will be made therefor.

1.06 WORK UNDER OTHER CONTRACTS

- A. None expected

1.07 FUTURE WORK

- A. None expected

1.08 WORK SEQUENCE

- A. Construct Work in stages and at times to accommodate City operation requirements during the construction period; coordinate construction schedule and operations with City.

1.09 WORK DAYS AND HOURS

- A. Work Days and hours: Monday-Friday inclusive, [7:00 a.m.-5:00 p.m.] local time.
- B. Work at the Site on weekends or holidays is not permitted, unless Contractor requests otherwise from City in writing at least 48 hours in advance and City approves in its sole discretion.

1.10 SHUTDOWN FOR DISCOVERY OF CULTURAL RESOURCES

- A. If discovery is made of items of historical archaeological or paleontological interest, immediately cease all Work in the area of discovery. Archaeological indicators may include, but are not limited to, dwelling sites, locally darkened soils, stone implements or other artifacts, fragments of glass or ceramics, animal bones, human bones, and fossils. After cessation of excavation, immediately contact City. Do not resume Work until authorization is received from City. When resumed, excavation or other activities shall be as directed by City.

1.11 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK

- A. Coordinate with City and any City forces, or other contractors and forces, as required by Document 00 7200 (General Conditions).
- B. [Optional] Employ a full-time coordinator to constantly review Contract Documents, submittals, changes, and prepare overlay drawings as necessary to avoid conflicts, errors, omissions and untimely construction.

1.12 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

- A. Allow City to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.
- B. Possession, use of Work, and placement and installation of equipment by City shall not in any way evidence the completion of the Work or any part of it.
- C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from City occupancy.
- D. Make available, in areas occupied, on a 24 hour per day and 7 day per week basis if required, any utility services, heating, and cooling in condition to be put in operation at the time of occupancy.
 - 1. Responsibility for operation and maintenance of said equipment shall remain with Contractor.
 - 2. Make, and City shall certify, an itemized list of each piece of equipment so operated with the date operation commences.
 - 3. Itemized list noted above shall be basis for commencement of warranty period for equipment.
 - 4. City shall pay for utility cost arising out of occupancy by City during construction.
- E. Use and occupancy by City prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by City.
- F. Prior to date of Final Acceptance of the Work by City, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to Defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required in Document 00 7200 (General Conditions).
- G. Use by City of Work or part thereof as contemplated by this Section 01 1100 shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by City of any of the conditions thereof.
- H. City may specify in the Contract Documents that portions of the Work, including electrical and mechanical systems or separate structures, shall be substantially completed on dates described in this Section 01 1100, if any, prior to Substantial Completion of all of the Work. Notify City in writing when Contractor considers any such part of the Work ready for its intended use and Substantially Complete and request City to issue a Certificate of Substantial Completion for that part of the Work.

1.13 CONTRACTOR USE OF SITE

- A. Access is available to the Site from **Cedar Street**. The entrance to the access road is protected with a gate and lock. When requested, Contractor shall insert Contractor's own lock in series and ensure that the entrance is locked at the end of each work day and at other times as may be necessary to control unauthorized entry.
- B. Contractor shall contact City at least 2 Business Days prior to entering the building and performing Work to allow City to arrange access into the building. Access Request forms shall be submitted 48 hours in advance of anticipated on-site Work to gain permission to enter Site and to allow notification to occupants.
- C. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws. Do not unreasonably encumber Site with materials or equipment.
- D. Assume full responsibility for protection and safekeeping of products stored on premises. Move any stored products that interfere with operations of City or other contractor.

- E. Coordinate parking, storage, staging, and Work areas with City. City will review and approve the proposed storage area for Contractor's equipment and materials. Do not store construction materials in the dripline of any tree.
- F. Prior to commencement of Work or excavation, Contractor and City shall jointly survey the area adjacent to the Project area making permanent note and record of such existing damage such as cracks, sags or other similar damage. This record shall serve as a basis for determination of subsequent damage to structures, conditions or other existing improvements due to Contractor's operations. All parties making the survey shall sign the official record of existing damage. Cracks, sags or damage of any nature to the adjacent Project area, not noted in the original survey but subsequently noted, shall be reported immediately to City.
- G. The Contractor shall follow all city ordinances in force during the duration of this Contract.
- H. It is essential that the Contractor perform the Work with as little interference and disturbance as possible to the surrounding neighborhood.
- I. When suspect materials, outside the scope of Work, are encountered during the Work or restoration process, the Contractor shall immediately contact the Project Manager for evaluation and approval of the methods for dealing with the material.

1.14 AIR QUALITY STANDARDS

- A. Ensure that idling time for all heavy equipment is minimized to reduce on-Site emissions.
- B. Maintain equipment in good mechanical condition.
- C. Cover trucks hauling dirt.
- D. Limit dust emissions during periods of high winds (greater than 15 miles per hour).
- E. Replace ground cover in disturbed areas as soon as possible.
- F. Enclose, cover, water, or apply soil binders to exposed stockpiles.
- G. Remove earth tracked onto neighboring paved roads at least once daily.
- H. Limit equipment speed to 10 miles per hour in unpaved areas.

1.15 CONSTRUCTION STAKING, MONUMENT PROTECTION AND REPLACEMENT

- A. Notify City at least three (3) Business Days prior to the need for initial staking. City will provide engineering surveys, City benchmarks, corner records, reference points, and/or monument cards that in City's judgment are necessary to establish site elevations for the Contractor to establish construction stakes in order to enable Contractor to proceed with the Work.
- B. If Contractor finds any additional information is necessary, notify City in writing 2 Business Days in advance. City shall have no liability for any inadequacy unless Contractor notifies City and City fails to cure within 3 Business Days of such notice.
- C. Contractor shall be responsible for laying out the Work and provide all construction staking. Contractor shall replace or repair construction stakes at own expense.
- D. Contractor shall perform brush clearing and traffic control, as necessary, in City's sole judgment.
- E. The Contractor shall protect and preserve all existing survey monuments, benchmarks, reference points, property monuments and stakes.
- F. Whenever Contractor knows or reasonably should know that any Work activity is likely to damage or destroy any survey monuments, benchmarks, reference points, property monuments, or construction stakes, or require relocation because of necessary changes in grades or locations, provide at least 3 Business Days advance notice to City. Survey monuments, benchmarks, reference points and property monuments shall not be disturbed until authorized by the City.
- G. Whenever the Contractor disturbs or removes any survey monuments, benchmarks, reference points, or property monuments, the Contractor shall replace the monument in accordance with

City Standard Plan 8090 or City Standard Plan 8091, as applicable. Standard Plans are available upon request. Monument casings (boxes and lids) shall be provided by the Contractor, and dome brass markers shall be supplied by the City.

- H. In the event that any non-referenced monuments become in danger of being disturbed due to construction, the Contractor shall cease the threatening activity and notify the City immediately. Response to endangered monuments is a priority call, and each monument shall be referenced in accordance with the City of Berkeley Monument Reference Guidelines, available upon request. In no case may an unreferenced monument be damaged during construction.
- I. Should any monument not designated for replacement sustain damage during construction, the Contractor shall bear the expense for rebuilding it as well as for the survey work the City survey crew or its survey consultant must perform in the process. In any instance where the City deems a damaged monument to be irreplaceable, the contractor shall be fined \$20,000 per monument.
- J. Monument replacement must be done in a neat, workman-like manner. Pavement cuts shall be accurate, with vertical cuts to exact dimensions as shown on the Standard Plans. Monument boxes and lids shall be placed at the proper finished grade and as detailed by Standard Plan 8090 or Standard Plan 8091. Existing monument lids shall be salvaged by the Contractor and delivered to the City.
- K. Each replacement monument shall be constructed such that the center of the dome brass marker is set within 0.04 foot of the referenced position. The new dome brass marker shall not receive final punching prior to seven (7) calendar days after completion of the monument construction.
- L. In any event, notify City whenever any survey monuments, benchmarks, reference points, or property monuments are lost or destroyed or require relocation because of necessary changes in grades or locations.
- M. If the City has elected to reference known monuments around or within the project site, a copy of the corner records for the referenced monuments shall be provided to the Contractor prior to the start of construction. For each monument that has been disturbed or removed, the replacement monument location(s) will be established by the City's survey crew or its survey consultant after final pavement is completed and upon request by the Contractor.
- N. All City of Berkeley Monuments located within the project area must be referenced, prior to work commencing, by a licensed land surveyor as required by Section 8771 of the Business and Professions Code. Corner Records of this work must be submitted for filing to both the County Surveyor of Alameda County, and the City of Berkeley, Public Works Department, Engineering Division, Survey Section.
- O. Illegible survey requests or requests without proper notification (at least 3 Business Days in advance), may result in delayed response. No extension of Contract Time will be allowed due to such delays.

1.16 PROTECTION OF EXISTING STRUCTURES AND UNDERGROUND FACILITIES

- A. The Drawings may indicate existing above- and below-grade structures, drainage lines, storm drains, sewers, water lines, gas lines, electrical lines, hot water lines, and other similar items and Underground Facilities that are known to City. At least (2) two Business Days, or as otherwise noted, prior to commencement of excavation, notify the owners of the following Underground Facilities:
 - 1. **Water lines:** EBMUD
 - 2. **Sewer lines:** Berkeley Public Works Department
 - 3. **Telephone Conduit:** Telephone Provider
 - 4. **Cable:** Cable Provider
 - 5. **Electrical Lines:** PG&E
- B. Where overhead service to a structure, known to receive service, does not exist, then

underground service shall be assumed to exist.

- C. Attention is also directed to the existence of overhead power and telephone lines.
- D. Perform pot-holing by hand within 24 inches (in any direction) of the Underground Facilities. This may be done on an area-by-area basis, but shall be accomplished at least 7 calendar days in advance of the date of construction within such area.
- E. Telemetry antennas: Ensure that the telemetry and voice communication antennas located on the [Identify the Building] roof remain operational. City's telemetry system is critical to the function and operation of Owner's water supply and distribution system. Coordinate relocation of equipment related to the telemetry and voice communication systems with Owner. Notify Owner 3 calendar days prior to conducting any Work in the vicinity of the telemetry antenna.
- F. No attempt has been made to locate utilities on private property such as sprinkler irrigation systems or electrical conduits on the project site or adjacent property. Contractor is responsible for contacting all property owners as necessary, and locating and marking utilities in the vicinity of the work prior to construction.
- G. In addition to reporting, if a utility is damaged, Contractor must take appropriate action as provided in Document 00 7200 (General Conditions).
- H. Additional compensation or extension of time on account of utilities not indicated or otherwise brought to Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in Document 00 7200 (General Conditions).

1.17 PERMITS

- A. Permits, agreements, or written authorizations that are known by City to apply to this Project are listed below:
 - 1. Storm Water Pollution Prevention
 - 2. Cal/OSHA Permit. Obtain, as applicable, permit(s) as required by Cal/OSHA for the following:
 - a. Construction of trenches or excavations that are five feet or more in depth and into which a person is required to descend.
 - b. Construction or demolition of any building, structure, or scaffolding for falsework more than three stories high, or the equivalent height (36 feet).
 - c. Erection or dismantling of vertical shoring systems more than three stories high, or the equivalent height (36 feet).
 - 3. The local Cal/OSHA district office is located at:
CAL/OSHA Headquarters
1515 Clay Street, Suite 1303
Oakland, CA 94612
(510) 622-2916
- B. All other permits that may be required, such as electrical, mechanical, fire prevention, irrigation, grading, slope protection, tree cutting, etc., have not been applied for and shall be obtained by Contractor. Applicable permit fees will be reimbursed to the extent specified in Document 00 7200 (General Conditions).

1.18 ACTUAL DAMAGES FOR PERMIT VIOLATIONS

- A. In addition to damages which are impracticable or extremely difficult to determine, for which liquidated damages will be assessed as described in Document 00 5200 (Agreement) and Document 00 7200 (General Conditions), City may incur actual damages, including fines imposed by any regulatory agency, resulting from **loss of use of the fire station 6** use in violation of legal or regulatory requirements where the violations result from Contractor's activities. Continuous

operation of the **fire station 6** in compliance with legal or regulatory requirements is essential to avoid discharges that would violate applicable regulations. Violations or threatened violations may subject City to fines and/or other costs or civil liabilities.

- B. Contractor shall be liable for and shall pay City the amount of any actual losses in addition to liquidated damages or other remedies provided by the Contract Documents.
- C. The amount of liquidated damages provided in Document 00 5200 (Agreement) and Document 00 7200 (General Conditions) is not intended to include, nor does the amount include, any damages incurred by City for reasons other than those listed in that paragraph. Any money due or to become due to Contractor may be retained by City to cover both the liquidated and the actual damages described above and, should such money not be sufficient to cover such damages, City shall have the right to recover the balance from Contractor or its sureties.

PART 2 - PRODUCTS

2.01 REFERENCE STANDARDS

- A. For products specified by association or trade standards, comply with requirements of standard, except where more rigid requirements are specified or are required by applicable codes.

2.02 PRODUCTS ORDERED IN ADVANCE

- A. As provided in Document 00 7200 (General Conditions) and Section 01 2000 (Measurement and Payment), and subject to all other provisions of the Contract Documents, City will pay for the following materials and equipment prior to incorporation into the Work:

1. Windows

2.03 CITY-FURNISHED PRODUCTS

- A. City-Furnished Products:

1. None

- B. City's Responsibilities:

- 1. Arrange for and deliver City-reviewed Shop Drawings, Product Data, and Samples, to Contractor.
- 2. Arrange and pay for delivery to Site.
- 3. On delivery, inspect products jointly with Contractor.
- 4. Submit claims for transportation damage and replace damaged, Defective, or deficient items.
- 5. Arrange for manufacturers' warranties, inspections, and service.

- C. Contractor's Responsibilities:

- 1. Review City-reviewed Shop Drawings, Product Data, and Samples.
- 2. Receive and unload products at Site; inspect for completeness or damage jointly with City.
- 3. Handle, store, install, and finish products.
- 4. Repair or replace items damaged after receipt.
- 5. Install into Project per Contract Documents.

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 2000

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

3.01 SUMMARY

- A. Section includes description of requirements and procedures for determining amount of Work performed and for obtaining payment for Work performed.

3.02 REFERENCES

- A. California Public Contract Code
- B. Code of Civil Procedures
- C. Government Code

3.03 COMPOSITION AND SCOPE OF CONTRACT SUM

A. Scope of Contract Sum

1. The Contract Sum for performance of the Work under Contract Documents, or under any Bid item, allowance, or Alternate, shall include full compensation for all Work required under the Contract Documents, including without limitation, all labor, materials, taxes, transport, handling, storage, supervision, administration, and all other items necessary for the satisfactory completion of the Work, whether or not expressly specified or indicated, incidental work and unexpected expenses, and all terms, conditions, requirements and limitations set forth in the Contract Documents.
2. Contract Sum may be expressed as lump sum, unit price, GMP, allowance, or combination thereof.

B. Unit Price items

1. Quantity of Work to be paid for under any item for which a unit price is fixed in Contract Documents shall be determined by City based on, so far as practicable, actual number of units satisfactorily completed, as determined by City and certified by Contractor, within prescribed or ordered limits, and no payment will be made for Work unsatisfactorily performed or done outside of limits.
2. Unit Prices shall apply to Work covered by unit prices so long as actual quantities performed on the Project are not less than 75 percent or greater than 125 percent of the estimated quantities bid or otherwise stated in the Contract Documents. If actual quantities exceed these parameters, then the unit price shall be adjusted by an amount to reflect the Contractor's incremental cost differential resulting from increased or decreased economies of scale.

C. Lump Sum Items

1. When estimated quantity for specific portion of Work is not indicated and/or Work is designated as lump sum, payment will be on a lump sum basis for Work satisfactorily completed in accordance with Contract Documents.
2. Payment for lump sum Work, or items of Work subject to a lump sum (e.g. without limitation, change order work), shall be made on the basis of satisfactory completion of such Work or work item, earned in progressive stages in accordance with the Contract

Documents, up to but not exceeding the Contractor's percentage completion of the Work or item.

3. Lump sum items shall be paid based upon the approved Schedule of Values, which shall be used to measure progressive payments based upon satisfactory progress towards completion of the item.

D. Allowance Items

1. Allowances: Allowance Work will be authorized by City in writing, following change order procedures to determine cost, supporting documentation and authorization to proceed. Unused allowance amounts at Contract completion shall reduce the Contract price accordingly.

3.04 PAYMENT PROCEDURES

A. Schedule of Values:

1. Within ten calendar days from issuance of Notice of Award and prior to the Contractor's first Application for Payment, Contractor shall submit a detailed breakdown of its Bid by scheduled Work items and/or activities, including coordination responsibilities and Project Record Documents responsibilities. Where more than one Subcontractor comprises the work of a Work item or activity, the Schedule of Values shall show a separate line item for each subcontract. Contractor shall furnish such breakdown of the total Contract Sum by assigning dollar values (cost estimates) to each applicable Progress Schedule network activity, which cumulative sum equals the total Contract Sum. This breakdown shall be referred to as the Schedule of Values.
2. Contractor's overhead, profit, insurance, cost of bonds (except to the extent expressly identified in a Bid item) and/or other financing, as well as "general conditions costs," (e.g., Site cleanup and maintenance, temporary roads and access, off-Site access roads, temporary power and lighting, security, and the like), shall be prorated through all activities so that the sum of all the Schedule of Values line items equals Contractor's total Contract Sum, less any allowances designated by City. Scheduling, record documents and quality assurance control shall be separate line items.
3. City will review the breakdown in conjunction with the Progress Schedule to ensure that the dollar amounts of this Schedule of Values are, in fact, reasonable cost allocations for the Work items listed. Upon favorable review by City, City will accept this Schedule of Values for use. City shall be the sole judge of fair market cost allocations.
4. City will reject any attempt to increase the cost of early activities, i.e., "front loading," resulting in a complete reallocation of moneys until such "front loading" is corrected. Repeated attempts at "front loading" may result in suspension or termination of the Work for default, or refusal to process progress payments until such time as the Schedule of Values is acceptable to City.

B. Contractor's Requests for Progress Payments

1. If requested by Contractor, progress payments will be made monthly, under the following conditions:
2. On or before the 25th Day of each month, Contractor shall submit to City five copies of an Application for Payment for the cost of the Work put in place during the period from the last Day of the previous month to the end of the current month, along with one copy of an updated Progress Schedule. Such Applications for Payment shall be for the expected total value of activities completed or partially completed, based upon Schedule of Values prices (or Bid item prices if unit price) of all labor and materials incorporated in the Work up until midnight of the last Day of that one month period, less the aggregate of previous payments. Accumulated retainage shall be shown as separate item in payment summary. City and Contractor will reconcile any differences in the field, based on the reconciled monthly report sheets. If Contractor is late

submitting its Application for Payment, that Application may be processed at any time during the succeeding one-month period, resulting in processing of Contractor's Application for Payment being delayed for more than a Day for Day basis.

3. Except as otherwise provided in a labor compliance program applicable to the Work (if any) or as otherwise required by City, concurrently with each Application for Payment, Contractor shall submit to the City the Contractor's and its Subcontractors' certified payroll records required to be maintained pursuant to Labor Code Section 1776 for all labor performed during pay periods ending during the period covered by the Application for Payment.
4. No progress payment will be processed prior to City receiving all requested, acceptable schedule update information and certified payrolls, and in City's sole and absolute discretion, City may deny the entire Application for Payment for noncompliance.
5. Each Application for Payment shall list each Change Order and Construction Change Directive ("CCD") executed prior to date of submission, including the Change Order/CCD Number, and a description of the Work activities, consistent with the descriptions of original Work activities. Contractor shall submit a monthly Change Order/CCD status log to City.
6. If City requires substantiating data, Contractor shall submit information requested by City, with cover letter identifying Project, Application for Payment number and date, and detailed list of enclosures. Contractor shall submit one copy of substantiating data and cover letter for each copy of Application for Payment submitted.
7. If Contractor fails or refuses to participate in monthly Work reconciliations or other construction progress evaluation with City, Contractor shall not receive current payment until Contractor has participated fully in providing construction progress information and schedule update information to City.

C. City's Review of Progress Payment Applications

1. City will review Contractor's Application for Payment following receipt and during the Progress Schedule and Billing Meeting. If adjustments need to be made to percent of completion of each activity, City will make appropriate notations and return to Contractor. Contractor shall revise and resubmit. All parties shall update percentage of completion values in the same manner, i.e., express value of an accumulated percentage of completion to date.
2. If City determines that portions of the Application for Payment are not proper or not due under the Contract Documents, then City may approve the other portions of the Application for Payment, and in the case of disputed items or Defective Work not remedied, may withhold up to 150 percent of the disputed amount from the progress payment.
3. Pursuant to California Public Contract Code §20104.50, if City fails to make any progress payment within 30 calendar days after receipt of an undisputed and properly submitted Application for Payment from Contractor, City shall pay interest to the Contractor equivalent to the legal rates set forth in subdivision (a) of Section 685.010 of the California Code of Civil Procedure. The 30-Day period shall be reduced by the number of calendar days by which City exceeds the seven-Day return requirement set forth herein.
4. As soon as practicable after approval of each Application for Payment for progress payments, City will pay to Contractor in manner provided by law, an amount equal to 95 percent of the amounts otherwise due as provided in the Contract Documents, or a lesser amount if so provided in Contract Documents and by law, provided that payments may at any time be withheld if, in judgment of City, Work is not proceeding in accordance with Contract, or Contractor is not complying with requirements of Contract, or to comply with stop notices or to offset liquidated damages accruing or expected. In

City's sole discretion, if Contractor has failed to comply with either its Progress Schedule update or project record documents requirements, City may retain an additional 5% of any earned amounts until such requirements are satisfied.

5. Before any progress payment or final payment is due or made, Contractor shall submit satisfactory evidence that Contractor is not delinquent in payments to employees, Subcontractors, suppliers, or creditors for labor and materials incorporated into Work. This specifically includes, without limitation, conditional lien release forms for the current progress payment and unconditional release forms for past progress payments. This also includes copies of certified payroll from contractor and subcontractors for the current payment period.

D. Payment for Material and Equipment Not Yet Incorporated Into the Work

1. No payment shall be made for materials or equipment not yet incorporated into the Work, except as specified elsewhere in the Contract Documents or as may be agreed to by City in its sole discretion. Where Contractor requests payment on the basis of materials and equipment not incorporated in the Work, Contractor must satisfy the following conditions:
 2. The materials and/or equipment shall be delivered and suitably stored at the Site or at another local location agreed to in writing, for example, a mutually acceptable bonded and insured warehouse.
 3. Full title to the materials and/or equipment shall vest in City at the time of delivery to the Site, warehouse or other storage location. Obtain a negotiable warehouse receipt, endorsed over to City for materials and/or equipment stored in an off-site warehouse. No payment will be made until such endorsed receipts are delivered to City.
 4. Stockpiled materials and/or equipment shall be available for City inspection, but City shall have no obligation to inspect them and its inspection or failure to inspect shall not relieve Contractor of any obligations under the Contract Documents. Materials and/or equipment shall be segregated and labeled or tagged to identify these specific Contract Documents.
 5. After delivery of materials and/or equipment, if any inherent or acquired defects are discovered, defective materials and/or equipment shall be removed and replaced with suitable materials and/or equipment at Contractor's expense.
 6. At Contractor's expense, insure the materials and/or equipment against theft, fire, flood, vandalism, and malicious mischief, as well as any other coverages required under the Contract Documents.
 7. Contractor's Application for Payment shall be accompanied by a bill of sale, invoice or other documentation warranting that City has received the materials and equipment free and clear of all liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect City interest therein, all of which must be satisfactory to City. This documentation shall include, but not be limited to, conditional releases of mechanics' liens and stop notices from all those providing materials and equipment as to which the Application for Payment relates, as well as unconditional releases of the same from the same as to the previous Application for Payment for which they have not already been provided. Amounts previously paid for materials and equipment prior to incorporation into the Work shall be deducted from amounts otherwise due Contractor as they are incorporated.

3.05 FINAL PAYMENT

A. Final Payment

1. As soon as practicable after all required Work is completed in accordance with Contract Documents, including punchlist, testing, record documents and Contractor maintenance after Final Acceptance, Contractor shall submit its Application for Final Payment.

2. Provided Contractor has met all conditions required for Final payment, City will pay to Contractor, in manner provided by law, unpaid balance of Contract Sum of Work (including, without limitation, retentions), or whole Contract Sum of Work if no progress payment has been made, determined in accordance with terms of Contract Documents, less sums as may be lawfully retained under any provisions of Contract Documents or by law.

B. Final Accounting

1. Prior progress payments and change orders shall be subject to audit and correction in the final payment.
2. Contractor and each assignee under an assignment in effect at time of final payment shall execute and deliver at time of final payment, and as a condition precedent to final payment, Document 00 6530 (Agreement and Release of Claims).

3.06 SUBSTITUTION OF SECURITIES

A. **Public Contract Code Section 22300.** In accordance with the provisions of Public Contract Code Section 22300, substitution of securities for any moneys withheld under Contract Documents to ensure performance is permitted under following conditions:

1. At request and expense of Contractor, securities listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and City which are equivalent to the amount withheld under retention provisions of Contract shall be deposited with Controller or with a state or federally chartered bank in California, as the escrow agent, who shall then pay such moneys to Contractor. Upon satisfactory completion of Contract, securities shall be returned to Contractor.
2. Alternatively, Contractor may request and City shall make payment of retentions earned directly to the escrow agent at the expense of Contractor. At the expense of Contractor, Contractor may direct the investment of the payments into securities and receive the interest earned on the investments upon the same terms provided for securities deposited by Contractor. Upon satisfactory completion of the work of the Contract Documents, Contractor shall receive from escrow agent all securities, interest, and payments received by the escrow agent from City. Contractor shall then pay to each Subcontractor, not later than 10 calendar days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention withheld to insure the performance of Contractor.
3. Contractor shall be beneficial owner of securities substituted for moneys withheld and shall receive any interest thereon.
4. Contractor may enter into an escrow agreement, form included in Contract Documents, as authorized under Public Contract Code Section 22300, specifying amount of securities to be deposited, terms and conditions of conversion to cash in case of default of Contractor, and termination of escrow upon completion of Contract Documents.
5. Public Contract Code Section 22300, in effect on Bid Day, is hereby incorporated in full by this reference and shall supersede anything inconsistent therewith.

PART 4 - PRODUCTS – NOT USED

PART 5 - EXECUTION – NOT USED

END OF SECTION

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 2600**MODIFICATION PROCEDURES****PART 1 - GENERAL****1.01 SUMMARY**

- A. Section includes requirements that supplement the paragraphs of Document 00 7200 (General Conditions).
- B. Description of procedures for modifying the Contract Documents and determining costs for changes in contract amounts.

1.02 PROCEDURES FOR CONTRACTOR INITIATED CHANGE ORDER

- A. Contractor-Initiated Change Proposal Request (CPR) and Procedures:
 - 1. Contractor may initiate changes by submitting a Change Proposal Request ("CPR").
 - 2. Whenever Contractor elects or is entitled to submit a CPR, Contractor shall prepare and submit to City for consideration a CPR using the form included in this Project Manual. All CPRs must contain a complete breakdown of costs of credits, deducts and extras; itemizing materials, labor, taxes, Markup and any requested changes to Contract Time. All Subcontractor Work shall be so indicated. Individual entries on the CPR form shall include applicable Schedule of Values code, with all amounts determined as provided herein. After receipt of a CPR with a detailed breakdown, City will act promptly thereon.
 - 3. If City accepts a CPR, City will prepare a Change Order for City and Contractor signatures.
 - 4. If CPR is not acceptable to City because it does not agree with Contractor's proposed cost and/or time, City will provide comments thereto. Contractor will then, within seven (7) calendar days (except as otherwise provided herein), submit a revised CPR.
 - 5. When necessity to proceed with a change does not allow City sufficient time to conduct a proper check of a CPR (or revised CPR), City may issue a Change Directive (CD) as provided below.
- B. Contractor-Initiated Request for Information (RFI) Procedures, Requirements and Limitations:
 - 1. Contractor may submit RFI's for clarifications in City-prepared Contract Documents, which may result in the Contractor submitting a CPR.
 - 2. Whenever Contractor requires information regarding the Project or City-prepared Contract Documents, or receives a request for such information from a Subcontractor, Contractor may prepare and deliver an RFI to City. Contractor shall use RFI format provided on approval by City. Contractor shall not issue an RFI to City solely to clarify Contractor-prepared Construction Documents. Contractor must submit time critical RFIs at least 30 calendar days before scheduled start date of the affected Work activity. Contractor shall reference each RFI to an activity of Progress Schedule and shall note time criticality of the RFI, indicating time within which a response is required. Contractor's failure to reference RFI to an activity on the Progress Schedule and note time criticality on the RFI shall constitute Contractor's waiver of any claim for time delay or interruption to the Work resulting from any delay in responding to the RFI.
 - 3. Contractor shall be responsible for its costs to implement and administer RFIs throughout

the Contract duration. Regardless of the number of RFIs submitted, Contractor shall not be entitled to additional compensation for the effort required to submit the RFIs. Contractor shall be responsible for City's administrative costs for answering RFIs where the answer could reasonably be found by reviewing the Contract Documents, as determined by City; at City discretion, such costs may be deducted from progress payments or final payment.

4. City will respond within ten (10) calendar days from receipt of RFI with a written response to Contractor. Contractor shall distribute response to all appropriate Subcontractors.
5. If Contractor is satisfied with the response and does not request a change in Contract Sum or Contract Time, then the response shall be executed without a change.
6. If Contractor believes the response is incomplete, Contractor shall issue another RFI (with the same RFI number with the letter "A" indicating it is a follow-up RFI) to City clarifying original RFI. Additionally, City may return RFI requesting additional information should original RFI be inadequate in describing condition.

C. Time Requirements:

1. If Contractor believes that a City response to an RFI, submittal or other City direction, results in change in Contract Sum or Contract Time, Contractor shall notify City with the issuance of a preliminary CPR within ten calendar days after receiving City's response or direction, and in no event after starting the disputed work or later than the time allowed under Article 12 of Document 00 7200 (General Conditions). If Contractor also requests a time extension, or has issued a notice of delay or otherwise requests a time extension with a CPR, then Contractor shall submit a Time Impact Evaluation (TIE) required herein concurrently with the CPR and in no event later than ten calendar days after providing the notice of delay.
2. If Contractor requires more time to accurately identify the required changes to the Contract Sum or Contract Time, Contractor may submit an updated and final CPR and TIE within 14 calendar days of submitting the preliminary CPR.
3. If City agrees with Contractor's CPR and/or TIE, then City will prepare a Change Order for City and Contractor signatures. If City disagrees with Contractor, then Contractor may give notice of potential claim as provided in Article 12 of Document 00 7200 (General Conditions), and proceed thereunder.
4. Contractor must submit CPRs, notices of potential claim or Claims within the required time periods. Any failure to do so waives Contractor's right to submit a CPR or file a Claim.

D. Cost Estimate Information:

1. Contractor and subcontractors shall, upon City's request, permit inspection of the original unaltered cost estimates, subcontract agreements, purchase orders relating to the change, and documents substantiating all costs associated with its CPR or Claims arising from changes in the Work.

1.03 PROCEDURES FOR CITY INITIATED CHANGE ORDERS

A. City Initiated Change Directives (CD):

1. City may, by Change Directive ("CD") or initially by Instruction Bulletin or by following the procedures for disputed work herein, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, with or without adjustment to Contract Sum or Contract Time.
2. If at any time City believes in good faith that a timely Change Order will not be agreed upon using the foregoing procedures, or at any other time, City may issue a CD with its recommended cost and/or time adjustment (if any). Upon receipt of CD, Contractor shall promptly proceed with the change of Work involved and respond to City within ten

- (10) calendar days.
3. Contractor's response must be any one of following:
 - a. Return CD signed, thereby accepting City response, including adjustment to time and cost (if any).
 - b. Submit a (revised if applicable) Cost Proposal with supporting documentation (if applicable, reference original Cost Proposal number followed by letter A, B, etc. for each revision), if City so requests.
 - c. Give notice of intent to submit a claim as described in Article 12 of Document 00 7200 (General Conditions), and submit its claim as provided therein.
 4. If CPR or the CD provides for an adjustment to any Contract Sum, the adjustment shall be based on one of the following methods:
 - a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation.
 - b. Contractor to proceed on cost reimbursable (force account) basis while negotiating towards a firm price.
 - c. Cost to be determined in a manner agreed.
 5. Change Directive signed by Contractor indicates the agreement of Contractor therewith, including adjustment in Contract Sum or the method for determining them. Such agreement shall be effective immediately and shall be finalized as a Change Order. Where City authorizes CD work on a time and materials basis up to a maximum amount, then Contractor shall promptly advise City upon reaching 75% of such maximum amount, otherwise Contractor shall accept fully the risk of completing the CD work without exceeding such maximum amount.
 6. If Contractor does not respond promptly or disagrees with the method for adjustment (or non-adjustment) in the Contract Sum, the method and the adjustment shall be determined by City on the basis of the Contract Documents and the reasonable expenditures and savings of those performing the Work attributable to the change. If the parties still do not agree on the proper adjustment due to a Change Directive, Contractor may file a Claim per Article 12 of Document 00 7200 (General Conditions) and/or City may direct the changed work through a unilateral change order. Contractor shall keep and present an itemized accounting in a manner consistent with the SOV, together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this paragraph shall be limited to those provided herein.
 7. Pending final determination of cost to City, Contractor may include amounts not in dispute in its Applications for Payment. The amount of credit to be allowed by Contractor to City for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by City. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for Markup shall be figured on the basis of net increase, if any, with respect to that change.
- B. City Initiated Change Order (CO) or Request for Proposal (RFP):
1. City may initiate changes in the Work or Contract Time by issuing a Request for Proposal ("RFP") or Change Order ("CO") to Contractor.
 2. City may issue an RFP to Contractor. Any RFP will detail all proposed changes in the Work and request a quotation of changes in Contract Sum and Contract Time from Contractor.
 3. In response to an RFP, Contractor shall furnish a Change Proposal Request (CPR) within twenty-one (21) Business Days of City's RFP. Upon approval of CPR, City may issue a Change Directive directing Contractor to proceed with extra Work.

4. If the parties agree on price and time for the work, the City will issue a Contact Change Order. If the parties do not agree on the price or time for a CPR, City may either issue a CD or decide the issue per Article 12 of Document 00 7200 (General Conditions). Contractor shall perform the changed Work notwithstanding any claims or disagreements of any nature.

1.04 PROCEDURES THAT APPLY TO CONTRACTOR- AND CITY-INITIATED CHANGE ORDERS

A. Adjustment of Schedules to Reflect Change Orders or CDs:

1. Contractor shall revise Schedule of Values and Application for Payment forms to record each authorized Change Order or CD as a separate line item and adjust the Contract Sum as shown thereon prior to the next monthly pay period.
2. Contractor shall revise the Progress Schedules prior to the next monthly pay period, to reflect CO or CD.
3. Contractor shall enter changes in Project Record Documents prior to the next monthly pay period.

B. Required Documentation for Adjustments to Contract Amounts:

1. For all changes and cost adjustments requested, Contractor shall provide documentation of change in Contract Amounts asserted, with sufficient data to allow evaluation of the proposal.
2. In all requests for compensation, cost proposals, estimates, claims and any other calculation of costs made under the Contract Documents, Contractor shall breakout and quantify costs of labor, equipment and materials identified herein, for Contractor and subcontractors of any tier.
3. Contractor shall, on request, provide additional data to support computations for:
 - a. Quantities of products, materials, labor and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Justification for any change in Contract Time and new Progress Schedule showing revision due, if any.
 - d. Credit for deletions from Contract, similarly documented.
4. Contractor shall support each claim or computation for additional cost, with additional information including:
 - a. Origin and date of claim or request for additional compensation.
 - b. Dates and times Work was performed and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, materials, equipment and subcontracts, similarly documented.
 - e. Credit for deletions from Contract, similarly documented.

C. Responses and Disputes:

1. For all responses for which the Contract Documents do not provide a specific time period, recipients shall respond within a reasonable time.
2. For all disputes arising from the procedures herein, Contractor shall follow Article 12 of Document 00 7200 (General Conditions).

1.05 COST DETERMINATION FOR CHANGES IN CONTRACT AMOUNTS

A. Calculation of Total Cost of Extra Work:

1. Total cost of changed Work, extra Work or of Work omitted shall be the sum of three components defined immediately below as: Component 1 (Direct Cost(s)); Component 2 (Markup); and, Component 3 (bonds, insurance, taxes)

2. Component 1: Direct Cost(s) of labor, equipment and materials, is calculated based upon actually incurred (or omitted) labor costs, material costs and equipment rental costs, as defined herein;
3. Component 2: Markup on such actually incurred Direct Costs, is applied in the percentages identified below; and
4. Component 3: Actual additional costs for any additionally required insurance, bonds, and/or taxes, defined herein, is calculated without Markup.

1.06 MEASUREMENT OF DIRECT COST OF CONSTRUCTION (COST COMPONENT NO. 1)

A. Composition of Component 1 (Direct Cost of Construction):

1. Component 1 has four subcomponents, also referred to as "LEMS":
 - a. Labor (Component 1A)
 - b. Equipment (Component 1B)
 - c. Materials (Component 1C)
 - d. Subcontractors (Component 1D)

B. Measurement of Cost of Labor (Component 1A):

1. Cost of Labor shall be calculated as: Cost of labor for workers (including forepersons when authorized by City) used in actual and direct performance of the subject work, whether employer is Contractor, Subcontractor or other forces, in the sum of the following:
 - a. Actual Wages: Actual wages paid shall include any employer payments to or on behalf of workers for health and welfare, pension, vacation, and similar purposes.
 - b. Labor surcharge: Payments imposed by local, county, state, and federal laws and ordinances, and other payments made to, or on behalf of, workers, other than actual wages as defined, such as worker's compensation insurance. Such labor surcharge shall not exceed generally accepted standards in the State for labor rates in effect on date upon which extra Work is accomplished.
 - c. Cost of labor shall include no other costs, fees or charges.
2. Labor cost for operators of equipment owned and operated by Contractor or any Subcontractor, shall be no more than rates of such labor established by collective bargaining agreements for type of worker and location of Work, whether or not owner-operator (i.e., Contractor or Subcontractor) is actually covered by such an agreement.
3. Cost of labor shall be recorded and documented in certified payroll records, maintained in the form customary and/or required in the State, delivered to City weekly.

C. Measurement of Cost of Equipment (Component 1B):

1. Measurement of Component 1B (Cost of Equipment). Cost of Equipment shall be calculated as: Cost of Equipment used in actual and direct performance of the subject work, whether by Contractor, Subcontractor or other forces. Cost of Equipment shall be calculated as herein described.
2. For rented equipment, cost will be based on actual rental invoices, appropriate for the use and duration of the work. Equipment used on extra Work shall be of proper size and type. If, however, equipment of unwarranted size or type and cost is used, cost of use of equipment shall be calculated at rental rate for equipment of proper size and type, as determined by City.
3. Equipment rental cost for Contractor or Subcontractor-owned equipment, shall be determined by reference to, and not in excess of, the generally accepted standards in the State for equipment rental rates in effect on date upon which extra Work is accomplished. If there is no applicable rate for an item of equipment, then payment shall be made for Contractor- or Subcontractor-owned equipment at rental rate listed in

the most recent edition of the CalTrans Standard Schedules and Specifications, and absent a rental rate therein, then the Association of Equipment Distributors (AED) book.

4. In all cases, rental rates paid shall be deemed to cover cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.
 5. Unless otherwise specified, manufacturer's ratings, and manufacturer-approved modifications, shall be used to classify equipment for determination of applicable rental rates. Individual pieces of equipment or tools not listed in said publication and having a replacement value of \$100 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefore as payment is included in payment for labor. Rental time will not be allowed while equipment is inoperative due to breakdowns.
 6. For equipment on Site, rental time to be paid for equipment shall be time equipment is in operation on extra Work being performed or on standby as approved by City. The following shall be used in computing rental time of equipment:
 - a. When hourly rates are listed, less than 30 minutes of operation shall be considered to be ½ hour of operation.
 - b. When daily rates are listed, less than four hours of operation shall be considered to be ½ Day of operation.
 - c. Rates shall correspond to actual rates paid by Contractor, i.e., if Contractor pays lower weekly or monthly rates, then same shall be charged to City.
 7. For equipment that must be brought to Site to be used exclusively on extra Work, cost of transporting equipment to Site and its return to its original location shall be determined as follows:
 - a. City will pay for costs of loading and unloading equipment.
 - b. Cost of transporting equipment in low bed trailers shall not exceed hourly rates charged by established haulers.
 - c. Cost of transporting equipment shall not exceed applicable minimum established rates of California Public Utilities Commission or appropriate State Dept. of Transportation.
 - d. City will not make any payment for transporting and loading and unloading equipment if equipment is used on Work in any other way than upon extra Work.
 - e. Rental period may begin at time equipment is unloaded at Site of extra Work and terminate at end of the performance of the extra Work or Day on which City directs Contractor to discontinue use of equipment, whichever first occurs. Excluding Saturdays, Sundays, and City legal holidays, unless equipment is used to perform extra Work on such Days, rental time to be paid per Day shall be four hours for zero hours of operation, six hours for four hours of operation and eight hours for eight hours of operation, time being prorated between these parameters. Hours to be paid for equipment that is operated less than eight hours due to breakdowns, shall not exceed eight less number of hours equipment is inoperative due to breakdowns.
 8. Employee vehicles are not part of Component 1A, rather, are included within Component 2 (Markup).
 9. Equipment costs shall include no other costs, fees or charges.
- D. Measurement of Cost of Material (Component 1C):
1. Cost of Material shall be calculated as herein described. Cost of such materials will be cost to purchaser (Contractor, Subcontractor or other forces) from supplier thereof, except as the following are applicable:
 2. If cash or trade discount by actual supplier is offered or available to purchaser, it shall be credited to City notwithstanding fact that such discount may not have been taken.

3. For materials salvaged upon completion of Work, salvage value of materials shall be deducted from cost, less discounts, of materials.
 4. If cost of a material is, in opinion of City, excessive, then cost of material shall be deemed to be lowest current wholesale price at which material is available in quantities concerned delivered to Site, less any discounts as provided in this Paragraph.
 5. Material costs shall include no other costs, fees or charges.
- E. Measurement of Cost of Subcontractors (Component 1D):
1. Where reimbursed or calculated per the terms of the Contract Documents, change order or Change Directive, cost of Subcontractors shall be calculated as amounts earned by Subcontractors procured in compliance with the Contract Documents and approved by the City, provided such subcontractor earned amounts meet the following requirements:
 - a. Such amounts are earned under the terms of the Subcontracts and the Work complies with the terms of the Contract Documents;
 - b. Such amounts are properly requested, documented and permitted under the terms of the subcontract(s) and the Contract Documents.
 - c. Total cost to City of Direct Costs of Construction (labor, equipment, materials), Markup, and costs of bonds, insurance and taxes, conform to contract limitations (i.e., totals paid by City do not exceed the 20% Markup limitation.).

1.07 MEASUREMENT AND PAYMENT OF MARK UP (COST COMPONENT 2)

- A. Markup Percentages for Changed Work (Component 2):
1. Markup on Direct Cost of labor and materials for extra Work shall be 15%. Markup on Direct Cost of equipment for extra Work shall be 15%.
 2. When extra Work is performed by Subcontractors, regardless of the number of tiers, total Markup on "Component 1" Direct Costs shall not exceed 20%. Contractor and its Subcontractors shall divide the 20% as they may agree.
 3. Under no circumstances shall the total Markup on any extra Work exceed twenty (20) percent, stated as a percent of the Direct Cost of labor, equipment and materials. This limitation shall apply regardless of the actual number of subcontract tiers.
 4. On proposals covering both increases and decreases in Contract Sum, Markup shall be allowed on the net increase only as determined above. When the net difference is a deletion, no percentage for Markup shall be allowed, but rather an appropriate percentage deduction shall be issued in the amount of the net difference.
- B. Measurement and Payment of Mark Up (Component 2):
1. Mark Up (Component 2) provides complete compensation to Contractor for:
 - a. All Contractor profit;
 - b. All Contractor home-office overhead;
 - c. All Contractor assumption of risk assigned to Contractor under the Contract Documents;
 - d. Subject to the qualifications below regarding self-performed work, all General Conditions and General Requirements.
 2. Profit. Compensation for profit included within Component 2 (Mark Up), includes without limitation: Fees of all types, nature and description; and Profit and margins of all types, nature and description.
 3. Home Office Expenses. Compensation for home office expenses included within Component 2 (Mark Up), includes without limitation: Salaries and other compensation of any type of Contractor's personnel (management, administrative and clerical), and all direct and indirect operating, travel, payroll, safety, storage, quality control, maintenance and overhead costs of any nature whatsoever, incurred by Contractor at

any location other than the Project specific site office, including without limitation, Contractor's principal or branch offices; insurance premiums other than those for Project specific insurance directed by the City in a change order; all hardware, software, supplies and support personnel necessary or convenient for Contractor's capture, documentation and maintenance of its costs and cost accounting data and cost accounting and control systems and work progress reporting.

4. Assumption of Risk. Compensation for Contractor's assumption of risk under the Contract Documents, included within Component 2 (Mark Up), includes without limitation loss, cost, damage, expense or liability resulting directly or indirectly from any of the following causes ("unallowable costs"), for Contractor and subcontractors of any tier: noncompliance with the Contract Documents, fault or negligence, defective or non-conforming Work, by Contractor or any Subcontractor or Vendor of any tier or anyone directly or indirectly employed by any of them, or for whose acts or omissions any of them are responsible or liable at law or under the Contract Documents; cost overruns of any type; costs in excess of any lump sum, not to exceed amount or GMP; costs resulting from bid or "buy out" errors, unallocated scope, or incomplete transfer of scope or contract terms to subcontractors; any costs incurred by Contractor relating to a Change in the Work without a Change Order or Change Directive in accordance with the Contract Documents; costs for work or materials for which no price is fixed in the Contract Documents, unless it is expressly specified that such work or material is to be paid for as extra work.
5. General Conditions and Division 1 General Requirements. Compensation for Contractor's General Conditions and General Requirements Costs included within Component 2 (Mark Up), includes compensation to Contractor for: Contractor's direct costs, without overhead or profit, for salaries and related forms of compensation and employer's costs for labor and personnel costs, of Contractor's employees and subconsultant's employees (if any), while and only to the extent they are performing Work at the Project Site. Personnel and Work compensated by this Component include without limitation: All required Project management responsibilities; all on-site services; monthly reporting and scheduling; routine field inspection of Work; general superintendence; general administration and preparation of cost proposals, schedule analysis, change orders and other supporting documentation as necessary; salaries of project superintendent, project engineers, project managers, safety manager, other manager, timekeeper, and secretaries; all cost estimates and updates thereto; development, validation and updates to the project schedule; surveying; estimating. Compensation for Contractor's General Requirements Costs included within Component 2 (Mark Up), compensates Contractor for its "General Requirements" Costs, including without limitation: all scheduling hardware, software, licenses, equipment, materials and supplies; purchase, lease or rental, build out, procurement, supporting equipment and maintenance of temporary on-Site facilities, Project field and office trailers and other temporary facilities, office equipment and supporting utilities; platforms, fencing, cleanup and jobsite security; temporary roads, parking areas, temporary security or safety fencing and barricades, etc.; all Contractor's motor vehicles used by any Contractor's personnel, and all costs thereof; all health and safety requirements, required by law or City procedures; all surveying; all protection of Work; handling and disposal fees; final cleanup; repair or maintenance; other incidental Work; all items, activities and function similar to any of those described above; all travel, entertainment, lodging, board and the like.
6. Personnel compensated by the Markup Component do not include workers of foreman level or below in the case of self-performed work; rather, such personnel shall be treated as a Direct Cost of Construction. Costs compensated by the Markup component do not include temporary measures specifically required by the changed work, not otherwise required or ongoing in the prosecution of the Work, that commence specifically to support the changed work and conclude with the completion of the

changed work. Such costs shall be treated as Direct Costs of Construction. Examples of General Requirements costs that this component may not cover are the following: temporary barricades or fencing of specific areas required specifically for the changed work; cranes required specifically for the changed work; extra security required specifically for the changed work.

1.08 MEASUREMENT AND PAYMENT OF BONDS INSURANCE TAXES (COMPONENT 3)

A. Measurement of Bonds, Insurance, Taxes (Component 3):

1. Component 3 (Bonds, Insurance, Taxes) consists of the cost of bonds, insurance and taxes, also referred to as **"BIT"**. All State sales and use taxes, applicable County and applicable City sales taxes, shall be included. Federal and Excise tax shall not be included.
2. There is no mark up on BIT.

1.09 EFFECT OF PAYMENT

A. Change Order Compensation is All Inclusive.

1. Except as provided expressly below regarding changes that extend the Contract Time, payment of calculated cost of extra work constitutes full and complete compensation for costs or expense arising from the extra Work, and is intended to be all inclusive.
2. Payment for Direct Cost of Construction (Component 1 or LEMS) is intended to be all-inclusive. Any costs or risks not delineated within cost of labor, equipment or materials herein, shall be deemed to be within the costs and risks encompassed by the applicable Markups and unallowable in any separate amount.
3. Payment of Markup (Component 2) is intended to be all-inclusive. Contractor waives claims for any further or different payment of cost and risk items delineated herein, other than the allowable percentage markup on costs set forth in the Contract Documents; such separate, further or different cost or risk items shall be unallowable, waived and liquidated within the allowable percentage markup.
4. Contractor shall recover no other costs or markups on extra work of any type, nature or description.

B. Exception for Changes Extending the Contract Time.

1. Where a change in the Work extends the Contract Time, Contractor may request and recover additional, actual direct costs, provided Contractor can demonstrate such additional costs are (i.) actually incurred performing the Work, (ii.) not compensated by the Markup allowed, and (iii) directly result from the extended Contract Time. Contractor shall make such request and provide such documentation following all required procedures, documentation and time requirements in the Contract Documents, and subject to all contract limitations of liability. Contractor may not seek or recover such costs using formulas (e.g., Eichleay).

C. Limits of Liability / Accord and Satisfaction.

1. The foregoing limits of compensation apply in all cases of claims for changed Work, whether calculating Change Proposal Requests, Change Orders or CDs, or calculating claims and/or damages of all types, and applies even in the event of fault, negligence, strict liability, or tort claims of all kinds, including strict liability or negligence. Contractor may recover no other costs arising out of or connected with the performance of extra Work, of any nature.
2. Under no circumstances may Contractor claim or recover special, incidental or consequential damages against City, its representatives or agents, whether arising from breach of contract, negligence, strict liability or other tort or legal theory, unless specifically and expressly authorized in the Contract Documents.

3. No change in Work shall be considered a waiver of any other condition of Contract Documents. No claim shall be made for anticipated profit, for loss of profit, for damages, or for extra payment whatever, except as expressly provided for in Contract Documents.
4. Accord and Satisfaction: Every Change Order and accepted CD shall constitute a full accord and satisfaction, and release, of all Contractor (and if applicable, Subcontractor) claims for additional time, money or other relief arising from or relating to the subject matter of the change including, without limitation, impacts of all types, cumulative impacts, inefficiency, overtime, delay and any other type of claim. Contractor may elect to reserve its rights to disputed claims arising from or relating to the changed Work at the time it signs a Change Order or approves a CD, but must do so expressly in a writing delivered concurrently with the executed Change Order or approved CD, and must also submit a Claim for the reserved disputed items pursuant to Article 12 of Document 00 7200 (General Conditions) no later than thirty (30) calendar days after Contractor's first written notice of its intent to reserve rights. Execution of any Change Order or CD shall constitute Contractor's representation of its agreement with this provision.

1.10 MISCELLANEOUS REQUIREMENTS

A. City-Furnished Materials.

1. City reserves right to furnish materials as it deems advisable, and Contractor shall have no claims for costs and Markup on such materials.

B. Records And Certification.

1. All charges shall be recorded daily and summarized in Change Proposal Request form attached hereto. Contractor or authorized representative shall complete and sign form each day. Contractor shall also provide with the form: the names and classifications of workers and hours worked by each; an itemization of all materials used; and a list by size type and identification number of equipment and hours operated.
2. City shall have the right to audit all records in possession of Contractor relating to activities covered by Contractor's claims for modification of Contract, including CD Work. This right shall be specifically enforceable, and any failure of Contractor to voluntarily comply shall be deemed an irrevocable waiver and release of all claims then pending that were or could have been subject to Article 12 of Document 00 7200 (General Conditions).

C.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

[COST PROPOSAL FORM FOLLOWS ON NEXT PAGE]

COST PROPOSAL (CP)

Owner **Fire Station No. 6 Remodel**
 Contract Number _____

CP Number: _____
 Date: _____
 In Response To _____
 RFP #, etc.

To: City of Berkeley
 Attention: **Priya Chopra**
1947 Center Street, 5th Floor
Berkeley, CA 94704
 Phone: (510) 981-6400
 Fax: (510) 981-6390

From: [Insert Contractor's Name/Address]

This Cost Proposal is in response to the above-referenced _____ [insert RFP, etc. as applicable].
 Brief description of change(s): _____

ITEM DESCRIPTION	PRIME CONTRACTOR	SUB 1	SUB 2	SUB 3	SUB 4	TOTAL
MATERIAL						
LABOR						
EQUIPMENT						
Other (Specify) Extended Overhead						
TOTAL COST						
Subcontractor's Overhead & Profit 15 percent						
Contractor's Overhead & Profit 15 percent						
Overhead & Profit to Contractor for Subcontractor's Work 5 percent						
(percent of Total Cost above not including any Overhead & Profit – may not exceed 20%)						
GRAND TOTAL						
REQUESTED CHANGE IN CONTRACT TIME (CALENDAR DAYS)						
(Time Impact Evaluation Enclosed)						

By Contractor: _____

Signature: _____

Date: _____

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 3119

PROJECT MEETINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Summary

1. Section includes description of required project meetings.

1.02 PRECONSTRUCTION CONFERENCE

- A. Preconstruction Conference. City will call for and administer Preconstruction Conference at time and place to be announced (usually the week prior to start of Work at the Site). Contractor, all major Subcontractors, and major suppliers shall attend Preconstruction Conference. Agenda may include, but not be limited to, the following items:

1. Schedules
2. Personnel and vehicle permit procedures
3. Use of premises
4. Location of the Contractor's on-Site facilities & Temporary Utilities
5. Security
6. Housekeeping
7. Submittal and RFI procedures
8. Inspection and testing procedures, on-Site and off-Site
9. Utility shutdown procedures
10. Control and reference point survey procedures
11. Injury and Illness Prevention Program
12. Contractor's Initial Progress Schedule
13. Contractor's Schedule of Values
14. Contractor's Schedule of Submittals
15. Jurisdictional agency requirements
16. Project Communication Procedures
17. Modification Procedures
18. Site Access by City and Consultants
19. As-Built/Record Documents
20. Permits & Fees
21. Coordination: (Work Performed for City under separate contract). (As Appropriate)
22. City will distribute copies of minutes to attendees. Attendees shall have 7 calendar days to submit comments or additions to minutes. Minutes will constitute final memorialization of results of Preconstruction Conference.

1.03 WEEKLY PROJECT MEETINGS

- A. City will schedule and administer weekly progress meetings throughout duration of Work. Progress meetings will be held weekly unless otherwise directed by City. Meetings shall be held at City's Offices unless otherwise specified in Contract Documents.
1. City's Representative will prepare agenda and distribute it 4 calendar days in advance of meeting to Contractor.
 2. Participants with agenda items shall present them.
 3. The Architect/Engineer and other responsible entities shall attend meetings unless

otherwise specified in Contract Documents or provided by City.

4. City shall record and distribute the meeting minutes. Minutes shall be distributed by the City to the Contractor within 3 business days after the meeting. Contractor shall distribute the minutes to those affected by decisions made at meeting. Attendees shall have five business days to submit comments or additions to the minutes. Minutes shall constitute final memorialization of results of meeting.
5. Progress meetings shall be attended by Contractor's job superintendent, major Subcontractors and suppliers, City, and others as appropriate to agenda topics for each meeting.
6. Agenda may contain the following items, as appropriate:
 - a. Review, revise as necessary, and approve previous meeting minutes
 - b. Review of Work progress since last meeting
 - c. Status of Construction Work Schedule, delivery schedules, adjustments
 - d. Submittal, RFI, and Change Order status
 - e. Review of the Contractor's safety program activities and results, including report on all serious injury and/or damage accidents
 - f. Other items affecting progress of Work

1.04 PROGRESS SCHEDULE AND BILLING MEETINGS

- A. A meeting will be held on approximately the 20th of each month to review the schedule update submittal and progress payment application.
- B. At this meeting, at a minimum, the following items will be reviewed:
 1. Percent complete of each activity;
 2. Time impact evaluations for Change Orders and Time Extension Request;
 3. Actual and anticipated activity sequence changes;
 4. Actual and anticipated duration changes; and
 5. Actual and anticipated Contractor delays.
 6. Waste Management Tracking/Tags
 7. As-Built/Record Documents
- C. These meetings are considered a critical component of overall monthly schedule update submittal and Contractor shall have appropriate personnel attend. At a minimum, Contractor's General Superintendent and Scheduler shall attend these meetings.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS**SECTION 01 3230****PROGRESS SCHEDULES AND SUBMITTALS****PART 1 - GENERAL****1.01 SUMMARY**

- A. Section includes description of requirements and procedures for submitting progress schedules and submittals.

1.02 CONTRACTOR TO SUBMIT PROGRESS SCHEDULES

- A. Contractor shall submit original (baseline) progress schedule two weeks prior to the first Application for Payment.
- B. Baseline Progress Schedule shall show Contractor's construction and procurement activities, including but not limited to, equipment procurement and delivery (Contractor and City supplied), activities with Subcontractors and suppliers, major submittal reviews, commissioning of systems, use of major equipment on site, and necessary interface with City and third parties required to complete the Work in a timely manner and in accordance with Contract Time.

1.03 SCHEDULE REQUIREMENTS.

- A. Unless City agrees in writing otherwise, progress schedule shall be on Microsoft Project, Primavera P6, Suretrack, or equivalent software, as City may specify, which Contractor shall prepare and supply to City, with all datapoint entries completed for start dates, necessary work activities, durations (not longer than 21 calendar days) and logic ties.
- B. Contractor's progress schedule may be in the form of a CPM (arrow) diagram or, if City agrees in writing, a bar chart or a Gantt chart. The hard copies of the schedule supplied to City shall indicate the critical path of the Work (in red) and shall show a logical progression of the Work through completion within Contract Time.
- C. Unless City agrees in writing otherwise, progress schedule shall also show early and late start and finish dates and total available float (float to the successor activity's late start date) for each activity. City has no obligation to accept an early completion schedule.

1.04 MONTHLY UPDATES

- A. Contractor's progress schedule shall be updated monthly to reflect actual progress. The schedule shall be subject to City's review and acceptance for use in monitoring Contractor's Work and evaluating Applications for Payment.
- B. Contractor shall supply City with an electronic copy of the updated progress schedule with each monthly payment application. Contractor shall provide City with **three-week** look ahead schedules weekly, showing in detail and activities and resources scheduled for the immediate two week period.

1.05 RECOVERY SCHEDULE

- A. City may request a recovery schedule should Contractor fall 21 or more calendar days behind any schedule Milestone, which schedule shall show Contractor's plan and resources committed to retain Contract completion dates.
- B. The recovery schedule shall show the intended critical path. If City requests, Contractor shall also:
 - 1. Secure and demonstrate appropriate Subcontractor and supplier consent to the recovery

Schedule.

2. Submit a narrative explaining trade flow and construction flow changes and man-hour loading assumptions for major Work activities and/or Subcontractors.

1.06 TIME IMPACT EVALUATION (“TIE”) FOR CHANGE ORDERS, TIME EXTENSIONS AND DELAYS:

- A. When Contractor requests a time extension for any reason, Contractor shall submit a TIE that includes both a written narrative and a schedule diagram depicting how the changed Work or other impact affects other schedule activities. The schedule diagram shall show how Contractor proposes to incorporate the changed Work or other impact in the schedule and how it impacts the current Schedule update critical path or otherwise. Contractor is also responsible for requesting time extensions based on the TIE’s impact on the critical path. The diagram shall be tied to the main sequence of scheduled activities to enable City to evaluate the impact of changed Work to the scheduled critical path.

- B. Contractor is responsible for all costs associated with the preparation of TIE’s, and the process of incorporating TIE’s into the current schedule update. Provide City with four copies of each TIE.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS**SECTION 01 3300****SUBMITTALS****PART 1 - GENERAL****1.01 SUMMARY**

- A. Section includes description of requirements and procedures for submittals.

1.02 SCHEDULE OF SUBMITTALS

- A. Contractor shall prepare for City's review and acceptance prior to commencement of work on the Site, for purposes of contract administration, a schedule of submittals (also referred to as a submittal register) required to complete the Work, prepared by Contractor and accepted by City for contract administration. Schedule of submittals shall include, for each submittal: the specification or drawing reference requiring the submittal, if applicable; the material, item, or process for which the submittal is required; the submittal number and identifying title of the submittal; the Contractor's anticipated submission date and the approval need date.
- B. Contractor shall update monthly the schedule of submittals to reflect actual submission and acceptance dates for submittals. Review by City of schedule of submittals does not excuse Contractor of obligation to supply, schedule and coordinate all submittals required by the Contract Documents.

1.03 CONTRACTOR TO SUBMIT SHOP DRAWINGS, PRODUCT DATA AND SUBMITTALS.

- A. Contractor shall review for compliance with Contract Documents, approve and submit to City Shop Drawings, Product Data, Samples and similar submittals required by Contract Documents.
- B. Contractor shall schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Contractor shall include certifications to be submitted with the pertinent drawings at the same time.
- C. Contractor shall coordinate scheduling, sequencing, preparing and processing of all submittals with performance of work so that work will not be delayed by submittal processing.
- D. Submittals shall specifically identify any Work depicted that does not conform to the Contract Documents.

1.04 CITY REVIEW OF SHOP DRAWINGS, PRODUCT DATA AND SUBMITTALS.

- A. After review by City of each Submittal, material will be returned to Contractor with actions defined as follows:
1. NO EXCEPTIONS TAKEN - Accepted subject to its compatibility with general design concept of the Work, future Submittals and additional partial Submittals for any portions of the Work not covered in this Submittal. Does not constitute acceptance or deletion of specified or required items not shown on the Submittal.
 2. MAKE CORRECTIONS NOTED (NO RESUBMISSIONS REQUIRED) - Same as item 1 above, except that minor corrections as noted shall be made by Contractor.
 3. REVISE AS NOTED AND RESUBMIT - Rejected because of major inconsistencies or errors that shall be resolved or corrected by Contractor prior to subsequent review by City.
 4. REJECTED - RESUBMIT - Submitted material does not conform to Drawings and/or Specifications in major respect, i.e.: wrong size, model, capacity, or material.

- B. Favorable review will not constitute acceptance by City of any responsibility for the accuracy, coordination, or completeness of the Submittals. Accuracy, coordination, and completeness of Submittals shall be sole responsibility of Contractor, including responsibility to back-check comments, corrections, and modifications from City's review before fabrication. Contractor, Subcontractors, or suppliers may prepare Submittals, but Contractor shall ascertain that Submittals meet requirements of Contract Documents, while conforming to structural space and access conditions at point of installation. City's review will be only to assess if the items covered by the Submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as indicated by the Contract Documents. Favorable review of Submittal, method of Work, or information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of responsibility for errors therein and shall not be regarded as assumption of risks or liability by City, or any officer or employee thereof, and Contractor shall have no claim under Contract Documents on account of failure or partial failure or inefficiency or insufficiency of any plan or method of Work or material and equipment so accepted. Favorable review shall be considered to mean merely that City has no objection to Contractor using, upon Contractor's own full responsibility, plan or method of Work proposed, or furnishing materials and equipment proposed.
- C. Unless otherwise specified, City's review will not extend to the means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
- D. Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been favorably reviewed by the City; otherwise, any such Work is at Contractor's sole risk.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 4100

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Regulatory requirements applicable to Contract Documents
2. Required provisions under Local Agency Disputes Act
3. Required references under federal law

1.02 GENERAL

A. Compliance with Laws

1. Conform to all applicable codes, laws, ordinances, rules and regulations, which shall have full force and effect as though printed in full in these Specifications. Codes, laws, ordinances, rules, regulations and ordinances (**Regulatory Requirements**) are not furnished to Contractor, because Contractor is assumed to be familiar with these requirements.
2. Any listing of Regulatory Requirements for hazardous waste abatement Work in the Contract Documents is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable Regulatory Requirements having application to the Work. Where conflict among the Regulatory Requirements or with these Specifications occurs, the most stringent requirements shall be used.
3. Specific reference in the Specifications to codes and regulations or requirements of regulatory agencies shall mean the latest printed edition of each adopted by the regulatory agency in effect at the time of the opening of Bids, except as may be otherwise specifically stated in the Contract Documents.

B. Precedence

1. Where specified requirements differ from Regulatory Requirements, the more stringent requirements shall take precedence. Where Drawings or Specifications require or describe products or execution of better quality, higher standard or greater size than required by Regulatory Requirements, then Drawings and Specifications shall take precedence so long as such increase is legal. Where no requirements are identified on Drawings or in Specifications, comply with all Regulatory Requirements of governing authorities having jurisdiction.
2. Should any conditions develop not covered by the Contract Documents wherein the finished Work will not comply with current codes, a Change Order detailing and specifying the required Work shall be submitted to and approved by City before proceeding with the Work.

1.03 REGULATORY REQUIREMENTS

A. Applicable Codes

1. Codes that apply to Contract Documents include all Codes applicable to construction, including, but not limited to, the following:

- a. California Building Code (2016 Edition or latest applicable code) as amended by applicable local ordinances for all construction work.
- b. California Electrical Code (2016 Edition or latest applicable code) as amended by applicable local ordinances for all construction work.
- c. California Plumbing Code (2016 Edition or latest applicable code) as amended by applicable local ordinances for plumbing, sewage disposal and health requirements.
- d. California Mechanical Code (2016 Edition or latest applicable code) as amended by applicable local ordinances for all construction work.
- e. California Energy Code (2016 Edition or latest applicable code) as amended by applicable local ordinances for all construction work.
- f. California Green Building Standard Code (2016 Edition or latest applicable code) as amended by applicable local ordinances for all construction work.
- g. International Fire Code (2016 Edition or latest applicable code) as amended by applicable local ordinances for all construction work.
- h. California Administrative Code Titles 15, 19 and 24 (with California amendments), and Americans with Disabilities Act (ADA) accessibility guidelines, whichever is more stringent.
- i. All State laws and City and County Ordinances, rules of the State or City or County Health Departments, rules of the National Board of Fire Underwriters and National Fire Protection Associations, and local power company regulations for mechanical and electrical work.

B. Applicable Laws, Statutes, Ordinances, Rules, And Regulations

1. During prosecution of Work to be done under Contract Documents, Contractor shall comply with applicable laws, ordinances, rules and regulations, including, but not limited to, the following:
 - a. Federal:
 - 1) Americans With Disabilities Act of 1990
 - 2) 29 CFR, Section 1910.1001, Asbestos
 - 3) 40 CFR, Subpart M, National Emission Standards for Asbestos
 - 4) Executive Order 11246
 - 5) Federal Endangered Species Act
 - 6) Clean Water Act
 - b. State of California:
 - 1) California Code of Regulations, Titles 5, 8, 17, 19, 21, 22, 24 and 25
 - 2) California Public Contract Code
 - 3) California Health and Safety Code
 - 4) California Government Code
 - 5) California Labor Code
 - 6) California Civil Code
 - 7) California Code of Civil Procedure
 - 8) CPUC General Order 95, Rules for Overhead Electric Line Construction
 - 9) CPUC General Order 128, Rules for Construction of Underground Electric Supply and Communications Systems
 - 10) Cal/OSHA
 - 11) OSHA: Hazard Communications Standards
 - 12) California Endangered Species Act
 - 13) Water Code
 - 14) Fish and Game Code
 - c. State of California Agencies:
 - 1) State and Consumer Services Agency
 - 2) Office of the State Fire Marshall
 - 3) Office of Statewide Health Planning and Development
 - 4) Department of Fish and Game
 - 5) All Air Quality Management Districts with jurisdiction

- 6) All Regional Water Quality Control Boards with jurisdiction
- 7) Division of the State Architect (if having jurisdiction)
- d. All Local Agencies with jurisdiction (cities, counties, fire departments)

C. Change Orders and Claims:

1. The California Public Contract Code, including but not limited to Section 7105(d)(2), and the California Government Code Section 930.2 et seq., apply to all contract procedures for changes, time extensions, change orders (time or compensation) and claims. Federal law (U.S. v. Holpuch 326 U.S. 234) shall supplement California law on the enforceability of these requirements.
2. Any change, waiver, or omission to implement contract change order and claim procedures shall have no legal effect unless expressly permitted in a fully executed change order approved by Contractor and City and approved as to form by their respective legal counsel.

D. Required Provisions On Contract Claim Resolution

1. The California Public Contract Code specifies required provisions on resolving contract claims less than \$375,000, which are set forth below, and constitute a part of this Contract.
2. For the purposes of this section, "Claim" means a separate demand by Contractor of \$375,000 or less for (1) a time extension, (2) payment or money or damages arising from Work done by or on behalf of Contractor arising under the Contract Documents and payment of which is not otherwise expressly provided for or the Claimant is not otherwise entitled to, or (3) an amount the payment of which is disputed by City. In order to qualify as a Claim, the written demand must state that it is a Claim submitted under paragraph 12 of Document 00 7200 (General Conditions) and be submitted in compliance with all requirements of Document 00 7200 (General Conditions), paragraph 12. Separate Claims which total more than \$375,000 do not qualify as a "separate demand of \$375,000 or less," as referenced above, and are not subject to this section.
3. A voucher, invoice, payment application, or other routine or authorized form of request for payment is not a Claim for purposes of this section. If such request is disputed as to liability or amount, then the disputed portion of the submission may be converted to a Claim under this section by submitting a separate claim in compliance with Contract Documents claim submission requirements.
4. Caution. This section does not apply to tort claims and nothing in this section is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 and Chapter 2 of Part 3 of Division 3.6 of Title 1 of the California Government Code.
5. Procedure:
 - a. The Claim must be in writing, submitted in compliance with all requirements of Document 00 7200 (General Conditions), paragraph 12, including, but not limited to, the time prescribed by and including the documents necessary to substantiate the Claim, pursuant to Document 00 7200 (General Conditions), paragraph 12.3. Claims must be filed on or before the day of final payment. Nothing in this section is intended to extend the time limit or supersede notice requirements for the filing of claims as set forth in Document 00 7200 (General Conditions), paragraph 12 or elsewhere in the Contract Documents.
 - b. For Claims of fifty thousand dollars (\$50,000) or less, City shall respond in writing within forty-five (45) calendar days of receipt of the Claim, or City may request in writing within thirty (30) calendar days of receipt of the Claim, any additional documentation supporting the Claim or relating to any defenses or claims City may have against Claimant. If additional information is thereafter required, it shall be

requested and provided in accordance with this section upon mutual agreement of City and Claimant. City's written response to the Claim, as further documented, shall be submitted to Claimant within fifteen (15) calendar days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.

- c. For Claims over Fifty Thousand Dollars (\$50,000) and less than or equal to \$375,000: City shall respond in writing within sixty (60) calendar days of receipt of the Claim, or City may request in writing within thirty (30) calendar days of receipt of the Claim, any additional documentation supporting the Claim or relating to any defenses or claims City may have against Claimant. If additional information is thereafter required, it shall be requested and provided in accordance with this section, upon mutual agreement of City and Claimant; City's written response to the Claim, as further documented, shall be submitted to Claimant within thirty (30) calendar days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.
- d. Meet and Confer: If Claimant disputes City's written response, or City fails to respond within the time prescribed above, Claimant shall notify City, in writing, either within fifteen (15) calendar days of receipt of City's response or within fifteen (15) calendar days of City's failure to timely respond, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon demand City will schedule a meet and confer conference within thirty (30) calendar days for settlement of the dispute.
- e. Following the meet and confer conference, if the Claim or any portion remains in dispute, Claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the California Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time Claimant submits its written claim as set forth herein, until the time that Claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

E. Compliance With Americans With Disabilities Act

1. Contractor acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a Contractor, must be accessible to the disabled public. Contractor shall provide the services specified in the Contract Documents in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under the Contract Documents and further agrees that any violation of this prohibition on the part of Contractor, its employees, agents or assigns shall constitute a material breach of the Contract Documents.

F. Compliance With IRCA

1. Contractor acknowledges that Contractor, and all subcontractors hired by Contractor to perform services under this Agreement, are aware of and understand the Immigration Reform and Control Act ("IRCA"). Contractor is and shall remain in compliance with the IRCA and shall ensure that any subcontractors hired by Contractor to perform services under this Agreement are in compliance with the IRCA. In addition, Contractor agrees to indemnify, defend and hold harmless City, its agents, officers and employees, from any liability, damages or causes of action arising out of or relating to any claims that Contractor's employees, or employees of any subcontractor hired by Contractor, are not authorized to work in the United States for Contractor or its subcontractor and/or any other claims based upon alleged IRCA violations committed by Contractor or Contractor's subcontractors.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 4200

REFERENCES AND DEFINITIONS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Reference standards, abbreviations, symbols, and definitions used in Contract Documents.
2. Full titles are given in this Section for standards cited in other Sections of Specifications.

1.02 REFERENCE TO STANDARDS AND SPECIFICATIONS OF TECHNICAL SOCIETIES;
REPORTING AND RESOLVING DISCREPANCIES

A. References

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated in the Contract Documents.
2. If during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such law or regulation applicable to the performance of the Work or of any such standard, specification, manual, or code or of any instruction of any supplier, Contractor shall report it in writing at once to City's Representative and Architect/Engineer, and Contractor shall not proceed with the Work affected thereby until consent to do so is given by City.

B. Precedence

1. Except as otherwise specifically stated in the Contract Documents or as may be provided by Change Order, CCD, or Supplemental Instruction, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. The provisions of any such standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents);
or
 - b. The provisions of any such laws or regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such law or regulation).
2. No provision of any such standard, specification, manual, code, or instruction shall be effective to change the duties and responsibilities of City, City's Representative, Architect/Engineer or Contractor, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to City, Architect/Engineer, or any of their consultants, agents, representatives or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

C. Referenced Grades, Classes, and Types:

1. Where an alternative or optional grade, class, or type of product or execution is included in a reference but is not identified in Drawings or in Specifications, provide the highest, best, and greatest of the alternatives or options for the intended use and prevailing conditions.

D. 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 opening Bids.
2. All amendments, changes, errata and supplements as of the effective date shall be included.

- E. **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 presumed that Contractor is familiar with and has access to these nationally- and industry-recognized specifications and standards.

1.03 DEFINITIONS

A. Meaning of Words and Phrases

Wherever any of the words or phrases defined below, or a pronoun used in place thereof, is used in any part of the Contract Documents, it shall have the meaning here set forth. Where abbreviations and symbols are used, such abbreviations and symbols shall be given their common meaning in the construction industry. In the Contract Documents, the neuter gender includes the feminine and masculine, and the singular number includes the plural.

While City has made an effort to identify all defined terms with initial caps, the following definitions shall apply regardless of case unless the context otherwise requires:

1. Addenda: Written or graphic instruments issued prior to the opening of Bids, which clarify, correct, or change the bidding requirements or the Contract Documents. Addenda shall not include the minutes of the Pre-Bid Conference and/or Site Visit.
2. Agreement (Document 00 5200): Agreement is the basic Contract Document that binds the parties to construction Work. Agreement defines relationships and obligations between City and Contractor and by reference incorporates Conditions of Contract, Drawings, and Specifications and contains Addenda and all Modifications subsequent to execution of Contract Documents.
3. Alternate: Work added to or deducted from the base Bid, if accepted by City.
4. Application for Payment: Written application for monthly or periodic progress or final payment made by Contractor complying with the Contract Documents.
5. Approved Equal: Approved in writing by City as being of equivalent quality, utility and appearance.
6. Architect/Engineer: If used elsewhere in the Contract Documents, "Architect/Engineer" shall mean a person (or that person's firm) holding a valid California State Architect's or Engineer's license representing the City in the administration of the Contract Documents. Architect/Engineer may be an employee of or an independent consultant to City. When Architect/Engineer is referred to within the Contract Documents and not an employee of City, Architect/Engineer shall be construed to include employees of Architect/Engineer and/or employees that Architect/Engineer supervises. When the designated Architect/Engineer is an employee of City, his or her authorized representatives on the Project will be included under the term Architect/Engineer. If Architect/Engineer is an employee of City, Architect/Engineer is the beneficiary of all

Contractor obligations to City, including without limitation, all releases and indemnities. Architect/Engineer may also be referred to as Architect or Engineer.

7. Asbestos: Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by OSHA or Cal/OSHA.
8. Bid: The offer or proposal of the Bidder submitted on the prescribed form(s) setting forth the prices for the Work to be performed.
9. Bidder: One who submits a Bid.
10. Bidding Documents: All documents comprising the Project Manual (including all documents and Specification Sections listed in Document 00 0110 [Table of Contents]), including documents supplied for bidding purposes only and Contract Documents.
11. Board: The governing body of the City.
12. Business Day: Any Day other than Saturday, Sunday, and the following days that have been designated as holidays by City. If a holiday falls on a Saturday, the preceding Friday will be the holiday. If a holiday falls on a Sunday, the following Monday will be the holiday.
 - a. New Year's Day, January 1;
 - b. Martin Luther King Jr.'s Birthday, third Monday in January;
 - c. Lincoln's Birthday, February 12;
 - d. Presidents' Day, third Monday in February;
 - e. Malcolm X Day, third Friday in May;
 - f. Memorial Day, last Monday in May;
 - g. Juneteenth, June 19;
 - h. Independence Day, July 4;
 - i. Labor Day, first Monday in September;
 - j. Indigenous People's Day, second Monday in October;
 - k. Veterans' Day, November 11;
 - l. Thanksgiving Day, as designated by the President;
 - m. The Day following Thanksgiving Day;
 - n. Christmas Day, December 25; and
 - o. Each day appointed by the Governor of California and formally recognized by the Governing Board as a day of mourning, thanksgiving, or special observance.
13. By City: Work that will be performed by City or its agents at the City's expense.
14. By Others: Work that is outside scope of Work to be performed by Contractor under this Contract, which will be performed by City, other contractors, or other means.
15. Change Order: A written instrument prepared by City and signed by City and Contractor, stating their agreement upon all of the following:
 - a. a change in the Work;
 - b. the amount of the adjustment in the Contract Sum, if any; and
 - c. the amount of the adjustment in the Contract Time, if any.
16. Change Proposal Request (CPR): A document prepared by Contractor requesting or initiating a request for modifying the Contract Documents and determining costs for changes in contract amount and any requested changes to Contract Time.
17. City: City is defined in Document 00 5200 (Agreement).
18. City-Furnished, Contractor Installed: Items furnished by City at its cost for installation by Contractor at its cost under Contract Documents.
19. City's Representative(s): See Document 00 5200 (Agreement).
20. Code Inspector: A local or state agency responsible for the enforcement of applicable

codes and regulations.

21. Concealed: Work not exposed to view in the finished Work, including within or behind various construction elements.
22. Construction Change Directive (“CCD”): A written order prepared and signed by City, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both.
23. Contract Amount: a change order price, line item price, Contract Sum, or other price assigned to a scope of work.
24. Contract Conditions or Conditions of the Contract: Consists of two parts: General Conditions and Supplementary Conditions.
 - a. General Conditions are general clauses that are common to the City Contracts, including Document 00 7200 (General Conditions).
 - b. Supplementary Conditions modify or supplement General Conditions to meet specific requirements for Contract Documents, including Document 00 7201 (Supplementary Conditions).
25. Contract Documents and Contract: Contract Documents and Contract shall consist of the documents identified as the Contract Documents in Document 00 5200 (Agreement), plus all changes, Addenda, and modifications thereto.
26. Contract Modification: Either:
 - a. a written amendment to Contract signed by Contractor and City; or
 - b. a Change Order; or
 - c. a Construction Change Directive; or
 - d. a written directive for a minor change in the Work issued by City.
27. Contract Sum: The sum stated in the Agreement and, including authorized adjustments, the total amount payable by City to Contractor for performance of the Work and the Contract Documents. The Contract Sum is also sometimes referred to as the Contract Price or the Contract Amount.
28. Contract Time: The number or numbers of calendar days or the dates stated in the Agreement to achieve Substantial Completion of the Work or designated Milestones; and/or to achieve Final Completion of the Work so that it is ready for final payment and is accepted.
29. Contractor: The person or entity identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number and neutral in gender. The term “Contractor” means the Contractor or its authorized representative.
30. Contractor’s Employees: Persons engaged in execution of Work under Contract as direct employees of Contractor, as Subcontractors, or as employees of Subcontractors.
31. Day: One calendar day of 24 hours measured from midnight to the next midnight, unless the word “day” is specifically modified to the contrary.
32. Defective: An adjective which, when modifying the word “Work,” refers to Work that is unsatisfactory or unsuited for the use intended, faulty, or deficient, that does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents (including but not limited to approval of Samples and “or equal” items), or has been damaged prior to final payment (unless responsibility for the protection thereof has been assumed by City). Unapproved substitutions are defective. City is the judge of whether Work is Defective.
33. Division of State Architect: A division of the State of California providing, design and construction oversight for K–12 schools and community colleges, and developing and

maintaining accessibility standards and codes utilized in public and private buildings throughout the State of California.

34. Drawings: The graphic and pictorial portions of Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.
35. Equal: Equal in opinion of City. Burden of proof of equality is responsibility of Contractor.
36. Final Acceptance or Final Completion: City's acceptance of the Work as satisfactorily completed in accordance with Contract Documents. Requirements for Final Acceptance/Final Completion include, but are not limited to:
 - a. Final cleaning is completed.
 - b. All systems having been tested and accepted as having met requirements of Contract Documents.
 - c. All required instructions and training sessions having been given by Contractor.
 - d. All Project Record Documents having been submitted by Contractor, reviewed by City, and accepted by City.
 - e. All punch list Work, as directed by City, having been completed by Contractor.
 - f. Generally all Work, except Contractor maintenance after Final Acceptance/Final Completion, having been completed to satisfaction of City.
37. Force Account: Work directed to be performed without prior agreement as to lump sum or unit price cost thereof, and which is to be billed at cost for labor, materials, equipment, taxes, and other costs, plus a specified percentage for overhead and profit.
38. Exposed: Work exposed to view in the finished Work, including behind louvers, grilles, registers and various other construction elements.
39. Furnish: Supply Indicated: Shown or noted on the Drawings.
40. Indicated: Shown or noted on the Drawings.
41. Install: Install or apply only, do not furnish.
42. Latent: Not apparent by reasonable inspection, including but not limited to, the inspections and research required as a condition to bidding under Document 00 7200 (General Conditions).
43. Law: Unless otherwise limited, all applicable laws including without limitation all federal, state, and local laws, statutes, standards, rules, regulations, ordinances, and judicial and administrative decisions.
44. Material: This word shall be construed to embrace machinery, manufactured articles, materials of construction (fabricated or otherwise), and any other classes of material to be furnished in connection with Contract, except where a more limited meaning is indicated by context.
45. Milestone: A principal event specified in Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all Work.
46. Modification: Same as Contract Modification.
47. Not in Contract or "NIC": Work that is outside the scope of Work to be performed by Contractor under Contract Documents.
48. Notice of Completion: Shall have the meaning provided in California Civil Code §3093, and any successor statute.
49. Off Site: Outside geographical location of the Project.
50. Owner: Owner is the City of Berkeley, see Document 00 5200 (Agreement).
51. Partial Utilization: Use by City of a substantially completed part of the Work for the

purpose for which it is intended (or a related purpose) prior to Substantial Completion of all of the Work.

52. PCBs: Polychlorinated byphenyls.
53. Phase: A specified portion of the Work (if any) specifically identified as a Phase in Document 00 5200 (Agreement) or Document 01 1100 (Summary).
54. Product Data: That information (brochures, catalog sheets, manufacturer's cut sheets, etc.) supplied by vendors having technical and commercial characteristics of the supplied equipment or materials and accompanying commercial terms such as warranties, instructions, and manuals.
55. Progress Report: A periodic report submitted by Contractor to City with progress payment invoices accompanying progress schedule. See Document 00 7200 (General Conditions).
56. Project: Total construction of which Work performed under Contract Documents may be whole or part.
57. Project Manager: If used elsewhere in the Contract Documents, "Project Manager" shall mean a person representing the City in the administration of the Contract Documents. Project Manager may be an employee of or an independent consultant to City. When Project Manager is referred to within the Contract Documents and no Project Manager has in fact been designated, then the matter shall be referred to City. The term Project Manager shall be construed to include employees of Project Manager and/or employees that Project Manager supervises. When the designated Project Manager is an employee of City, his or her authorized representatives on the Project will be included under the term Project Manager. If Project Manager is an employee of City Project Manager is the beneficiary of all Contractor obligations to City, including without limitation, all releases and indemnities.
58. Project Manual: Project Manual consists of Bidding Requirements, Agreement, Bonds, Certificates, Contract Conditions, Drawings, and Specifications.
59. Project Record Documents: All Project deliverables required under the Contract Documents, including without limitation, as built drawings; Installation, Operation, and Maintenance Manuals; and Machine Inventory Sheets.
60. Provide: Furnish and install.
61. Request for Information ("RFI"): A document prepared by Contractor requesting information regarding the Project or Contract Documents. The RFI system is also a means for City to submit Contract Document clarifications or supplements to Contractor.
62. Request for Proposals ("RFP"): A document issued by City to Contractor whereby City may initiate changes in the Work or Contract Time as provided in Contract Documents.
63. Request for Substitution ("RFS"): A document prepared by Contractor requesting substitution of materials as permitted and to the extent permitted in Contract Documents.
64. RFI-Reply: A document consisting of supplementary details, instructions, or information issued by City that clarifies or supplements Contract Documents, and with which Contractor shall comply. RFI-Replies do not constitute changes in Contract Sum or Contract Time except as otherwise agreed in writing by City. RFI-Replies will be issued through the RFI administrative system.
65. Samples: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

66. Shop Drawings: All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
67. Shown: As indicated on Drawings.
68. Site: The particular geographical location of Work performed pursuant to the Contract Documents.
69. Specifications: The written portion of the Contract Documents consisting of requirements for materials, equipment, construction systems, standards, and workmanship for the Work; performance of related services.
70. Specified: As written in Specifications.
71. Subcontractor: A person or entity that has a direct contract with Contractor to perform a portion of the Work at the Site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and neutral in gender and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.
72. Substantial Completion: The Work (or a specified part thereof) has progressed to the point where, in the opinion of City as evidenced by a notice or certificate of Substantial Completion, the Work is sufficiently complete, in accordance with Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended, and unperformed or incomplete work elements are minor in nature; or if no such certificate is issued, when the Work (or specified part) is complete and ready for final payment as evidenced by written recommendation of City for final payment. The terms "Substantially Complete" and "Substantially Completed" as applied to all or part of the Work refer to Substantial Completion thereof.
73. Supplemental Instruction: A written directive from City to Contractor ordering alterations or Modifications that do not result in change in Contract Sum or Contract Time, and do not substantially change Drawings or Specifications.
74. Testing and Special Inspection Agency: An independent entity engaged to inspect and/or test the workmanship, materials, or manner of construction of buildings or portions of buildings, to determine if such construction complies with the Contract Documents and applicable codes.
75. Time Impact Evaluation (TIE): A written narrative and a schedule diagram depicting how the changed Work or other impact affects other scheduled activities, prepared by Contractor in conjunction with a Change Proposal Request (CPR) for Change Orders, Time Extensions, and Delays. See Document 01 3230 (Progress Schedules and Submittals), and Document 01 2600 (Modification Procedures).
76. Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities that have been installed underground to furnish any of the following services or materials: Electricity, gases, chemicals, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, or water.
77. Unit Price Work: Shall be the portions of the Work for which a unit price is provided in Document 00 5200 (Agreement) or Section 01 1100 (Summary).
78. Work: The entire completed construction, or the various separately identifiable parts thereof, required to be furnished under the Contract Documents within the Contract Time. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract

Documents including everything shown in the Drawings and set forth in the Specifications. Wherever the word “work” is used, rather than the word “Work,” it shall be understood to have its ordinary and customary meaning.

B. Other Defined Terms

The following terms are not necessarily identified with initial caps; however they shall have the meaning set forth below:

1. Wherever words “as directed,” “as required,” “as permitted,” or words of like effect are used, it shall be understood that direction, requirements, or permission of City is intended. Words “sufficient,” “necessary,” “proper,” and the like shall mean sufficient, necessary, or proper in judgment of City. Words “approved,” “acceptable,” “satisfactory,” “favorably reviewed,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to, or favorably reviewed by City.
2. Wherever the word “may” or “ought” is used, the action to which it refers is discretionary. Wherever the word “shall” or “will” is used, the action to which it refers is mandatory.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 4500

TESTING AND INSPECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Regulatory requirements for testing and inspection.
2. Contractor's quality control.
3. Quality of the Work.
4. Inspections and tests by governing authorities.
5. Inspections and tests by serving utilities.
6. Inspections and tests by manufacturer's representatives.
7. Inspections by Independent Testing and Inspection Agency.

1.02 RELATED SECTIONS

- A. Document 00 7200 General Conditions
- B. Section 01 4100 Regulatory 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 Drawings and Specifications 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 Drawings and Specifications, including, by reference, all Codes, laws, rules, 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 necessary to perform quality control functions to ensure that 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.
- C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling and staining, until Acceptance by the City.

- 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 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 deviations are acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by City or Architect/Engineer in accordance with provisions of the General Conditions of the Contract.
1. Contractor shall cooperate by making Work available for inspection by City, Architect/Engineer 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 or fabricated.
 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by City or Architect/Engineer.
 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 Architect/Engineer: Periodic and occasional observations of Work in progress will be made by Architect/Engineer as deemed necessary to review progress of Work and general conformance with design intent.
- H. Limitations on Inspection, Test and Observation: Neither employment of independent testing and inspection agency nor observations by Architect/Engineer shall in way relieve Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents.
- I. Rejection of Work: City reserves the right to reject all Work not in conformance to the requirements of the Drawings and Specifications.
- J. Correction of Non-Conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by the Contractor at no change in Contract Sum or Contract Time.
- K. Acceptance of Non-Conforming Work: Acceptance of nonconforming Work, without specific written acknowledgement and approval of the City, shall not relieve the Contractor of the obligation to correct such Work.
- L. Contract Adjustment for Non-Conforming Work: Should City determine that it is not feasible or in City's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between City and Contractor. If equitable amount cannot be agreed upon, a Construction Change Directive will be issued and the amount in dispute resolved in accordance with applicable provisions of the General Conditions.

1.05 INSPECTIONS AND TESTS BY GOVERNING AUTHORITIES

- A. Regulatory Requirements for testing and Inspection: Comply with Uniform Building Code (UBC) 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 the Division of Occupational Safety and Health (Cal/OSHA), City of Berkeley Public Works Department, Fire Department, and similar agencies.

2. Except as specifically noted, scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

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 TESTS 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 conditions of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum.

1.08 INSPECTIONS BY INDEPENDENT TESTING AND INSPECTION AGENCY

- A. City will select an independent testing and inspection agency or agencies to conduct tests and inspections as indicated on Drawings, in Specifications and as required by governing authorities having jurisdiction.
- B. Responsibility for payment for tests and inspections shall be as indicated in schedule below. All time and costs for Contractor's service related to such tests and inspections shall be included in Contract Time and Contract Sum.
- C. Contractor shall notify City and, if directed by City, testing and inspection agency, 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 authorities 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 which necessitate additional testing, inspection and related services.
 4. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design.
- E. Tests and inspections shall include the following:

<u>Section</u>	<u>Inspections and Tests</u>	<u>Paid by</u>
CBC 1705.2.1	Structural Steel	Paid by City.

- F. Test and Inspection Reports: After each inspection and test, one copy of report shall be promptly submitted each to Architect/Engineer, City, City's field 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 number.
 - c. Identification of product and Specifications Section in which Work is specified.
 - d. Name of inspector.
 - e. Date and time of sampling or inspection.
 - f. Location in Project where sampling or inspection was conducted.
 - g. Type of inspection or test.

- h. Date of test.
 - 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 that tests and inspections specified or otherwise required for the project, have been completed and that material and workmanship comply with the Contract Drawings and Specifications. Verification reports shall be submitted at intervals not exceeding 6 months, at Substantial Completion of the Project, and at all times when Work of Project is suspended.
- G. Contractor Responsibilities in Inspections and Tests:
 1. Notify testing and inspection agencies 24 hours in advance of expected time for operations requiring inspection and testing services.
 2. Deliver to laboratory or designated location, adequate samples of materials proposed to be used which require advance testing, together with proposed mix designs.
 3. Cooperate with testing and inspection agency personnel, City's field representative, Architect/Engineer. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.
 4. 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.
 5. Provide, at least 15 calendar days in advance of first test or inspection of each type, a schedule of tests or inspections indicating types of tests or inspections and their scheduled dates.
 6. Provide 24 hours advance notice to the Project Manager, Architect/Engineer of each test and inspection, as directed.
 - a. When tests or inspections cannot be performed after such notice , reimburse City for Testing Laboratory personnel and travel expenses incurred due to Contractor's negligence.

1.09 ADDITIONAL TESTING AND INSPECTION

- A. If initial tests or inspections made by the Testing Laboratory reveal that materials do not comply with Contract Documents, or if City has reasonable doubt that materials do not comply with Contract Documents, additional tests and inspections shall be made as directed.
 1. If additional tests and inspections establish that materials comply with Contract Documents, all costs for such tests and inspections shall be paid by City.
 2. If additional tests and inspections establish that materials do not comply with Contract Documents, all costs of such tests and inspections shall be deducted for Contract Sum.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 5200**TEMPORARY FACILITIES****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. General Conditions Document 00 7200
- B. Supplemental General Conditions Document 00 7201

1.02 SUMMARY

- A. This section describes the temporary facilities required for the Project site. The Project site shall be maintained by Contractor as set forth in this section unless otherwise added to or superseded by the requirements of Document 00 7200 (General Conditions).

1.03 TEMPORARY FACILITIES

- A. Contractor shall obtain permits for, install and maintain in safe condition, whatever scaffolds, hoisting equipment, barricades, walkways, or other temporary structures which may be required to accomplish the work on the Project. Such structures shall be adequate for the intended use and capable of safely accepting all loads that may be imposed upon them. They shall be installed and maintained in accordance with all applicable State and local codes and regulations.
- B. Contractor shall provide and maintain temporary heat from an approved source whenever in the course of the Work it may become necessary for curing and drying of materials, or to warm spaces as may be required for the installation of materials or finishes.
- C. Contractor shall provide and maintain any and all facilities that may be required for dewatering in order that work may proceed on the Project. If it is necessary for dewatering to occur continually, Contractor shall have on hand whatever spare parts or equipment that may be required to prevent interruption of dewatering.
- D. Contractor shall provide and maintain all utility services necessary to perform the work under this Contract.
- E. Materials, tools, accessories, etc., shall be stored only where directed by City. Storage area shall be kept neat and clean. Security of stored items shall be Contractor's responsibility.
- F. Flammable materials stored on site, shall be stored in a safe and secure manner per the manufacture's direction. Extra precautions, including clear identification, shall be the responsibility of Contractor.
- G. Contractor shall maintain an office at the Project site that will be his headquarters for the Project. Any communications delivered to this office shall be considered as delivered to Contractor. Location and size of office shall be such that it will adequately serve the needs of Contractor's superintendent and assistants in the performance of their duties.
- H. Contractor shall promptly remove all such temporary facilities when they are no longer needed for the work or for completion of the Project, mutually agreed upon by Contractor and City.
- I. Contractor shall safe-off building prior to demolition.

1.04 SIGNS

- A. No signs may be displayed on or about the City's property (except those required by law) without the City's specific approval; the size, content, and location to be as specified by the City.

1.05 USE OF ROADWAYS AND WALKWAYS

- A. Contractor shall never block or interfere with use of any existing roadway, walkway or other facility for vehicular or pedestrian traffic, from any party entitled to use it. Wherever and whenever such interference becomes necessary for the proper and convenient performance of the Work, and no satisfactory detour route exists, Contractor shall, before beginning the interference, notify City and post signs at least 72 hours in advance of such interference, and provide a satisfactory detour, including temporary bridge if necessary, or other proper facility for traffic to pass around or over the interference. Contractor shall maintain the detour in a safe and satisfactory condition as long as the interference continues, all without extra payment unless otherwise expressly stipulated in the Specifications.
- B. Contractor shall at all times comply with any and all requirements applying to the work under the transportation, circulation and parking mitigation measures, truck and construction access plan.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 5526**TRAFFIC CONTROL**

Contractor shall provide traffic control throughout the project as needed for the various traffic situations and street configurations in full conformance with the latest "California Manual on Uniform Traffic Control Devices and the Federal Highway Administration (FHWA) Manual of Uniform Traffic Control Devices (MUTCD) latest edition, as amended for use in California" herein after referred to as Traffic Control Manual. The Traffic Control Manual may be obtained online at <https://dot.ca.gov/programs/safety-programs/camutcd/camutcd-files>

As required, the Contractor shall submit a Traffic Control Plan to the City of Berkeley's Transportation Division or the California Department of Transportation (Caltrans).

Construction area signs and temporary traffic control devices shall be furnished, installed, maintained and removed by the Contractor. Traffic signage, e.g., warning signs and detour signs, may be required for this project. Contractor shall be responsible for placing all barricades for perimeter street closures as required. Per Section 501.10 – Traffic Control of the General Provisions, at main entry and exit points of each work location, the Contractor shall provide a 30" x 30" sign advising the public of the anticipated period of time that traffic delays may be anticipated. This sign will also include name and telephone number of the Contractor along with starting and completion dates of the contract. Sign will be erected 7 calendar days in advance of any work.

Construction work requiring traffic control on San Pablo Avenue (State Route 123) or Ashby Avenue (State Route 13) will require an encroachment permit from Caltrans. Contractor is solely responsible for obtaining and abiding by any necessary encroachment permits. The permit fees and other associated costs to obtain the required permits from the State of California shall be included in the cost bid for this item. Contractor shall be responsible for providing traffic control plan for encroachment permit to and obtaining approval of said traffic control plan from State of California. Contractor shall be responsible for all notification of work to, application for and obtaining work authorization number from Caltrans. Any damages arising from work related to encroachment permit shall be the responsibility of the Contractor.

The Contractor shall be responsible for posting "No Parking" signs a minimum of four calendar days in advance of concrete work, paving operations, failed area, and planning work so as to comply with the City's construction notification requirement of 4 days. Cones shall not be used as barricades. "No Parking" signs may be obtained from the City at no cost to the Contractor. The "No Parking" signs shall be updated as necessary. The Contractor shall check and maintain (e.g., re-install missing signs, reposition displaced barricades, etc.) postings on a regular basis prior to start of work.

If traffic is to be detoured over a centerline or detoured in advance of the work, detour plans must be part of the submitted Traffic Control plans and approved by the City prior to starting work. Police, Fire and Public Works Department shall be notified by the contractor at least four calendar days in advance of any work which will interfere with the normal flow of vehicular or pedestrian traffic. Intersection closure may only occur if the two adjacent intersections remain open, unless otherwise approved by the City. The Contractor shall coordinate his traffic control/diversion plan with the City, a minimum of 3 weeks prior to starting work, to assure that traffic is diverted in a safe and convenient manner.

Truck routes shall be approved by the City prior to start of work.

Truck traffic is not allowed on Marin Avenue within the City of Albany. Personal vehicles of the Contractor's employees shall not be parked within the area of work.

A minimum of one (paved) traffic lane, not less than 12 ft. wide, shall remain open for use by public traffic during construction operations. When construction operations are not actively in progress, not less than two such lanes shall be open to public traffic. The Contractor may be allowed to close residential streets if approved in writing in advance by the City. No work that interferes with public traffic shall be performed between 6:00 p.m. and 7:00 a.m.

Start of work shall be no earlier than 7:00 a.m. No work process, including starting, warm up, and delivery of equipment, shall be done outside of work hours. The use of vehicle horns to alert residents to move their vehicles out of the construction zone is not permitted. The Contractor should attempt to locate vehicle owners by knocking on doors.

The full width of the traveled way shall be open for use by public traffic on Saturdays, Sundays and designated legal holidays, and when construction operations are not actively in progress, unless specified otherwise.

Minor deviations from the requirements of this section concerning hours of work may be permitted upon the written request of the Contractor, if in the opinion of the City, public traffic will be better served and the work expedited. Such deviations shall not be adopted until the City provides written approval.

The traffic control system shall consist of closing traffic lanes in accordance with the Traffic Control Manual. Signs and other devices for the traffic control system shall conform to the Traffic Control Manual.

If any component in the traffic control system is damaged, displaced or ceases to operate or function as specified, from any cause during the progress of the work, the Contractor shall immediately repair said component to its original condition or replace said component and shall restore the component to its original location.

Lane closures may be made for work periods only. At the end of each work period, all components of the traffic control system shall be removed from the traveled way, shoulder and auxiliary lanes. If the Contractor so elects, said components may be stored at selected central locations approved by the City within the limits of the public right-of-way.

Sufficient barricades and flashing lights shall also be placed to supplement all traffic signs used to divert and control traffic. Signs and barricades shall be checked periodically every day and replaced or repaired as necessary. Any hazardous conditions shall be immediately eliminated.

The Contractor, at the end of each day, shall provide ADA compliant pedestrian and vehicle crossings at all street intersections. If the project is left open overnight, it shall be graded in such a way that pedestrians and vehicles can safely pass through the project. Temporary concrete, asphalt, or wood ramps shall be installed and maintained at all locations where existing ramps have been temporarily removed.

Cleanliness is extremely important. Dust producing conditions shall be eliminated as soon as they are created.

If Contractor violates any of these provisions, a fine of \$1,000 will be assessed for the first violation, \$5,000 for the second and \$10,000 for the third and further subsequent violations.

ACCESS AND EGRESS

The Contractor shall endeavor to cooperate with all business owners and residents occupying properties fronting on the streets in the matter of access and egress. **Contractor shall maintain a clear and accessible pedestrian corridor.**

Where a business property has more than two vehicular paths of access, one path, 10 feet in width, shall remain open during all business hours, unless accepted by the City.

LANE CLOSURES

No lane closures shall be permitted on the following streets Monday through Friday between 7:00 A.M. – 9:00 A.M. and 4:00 P.M. – 6:00 P.M., and Saturdays between 10:00 A.M. – 2:00 P.M., unless approved in advance by the City, if it can be explained why such closure cannot reasonably be avoided. On Saturdays when UC football games are scheduled all construction-related lane closures along these corridors must be reopened at least 4 hours before the start of the game and remain open for 2 hours after the conclusion of the game.

Major Streets:

- University Avenue
- San Pablo Avenue
- Shattuck Avenue
- Telegraph Avenue
- Sacramento Street
- Martin Luther King Jr. Way
- Ashby Avenue
- College Avenue
- Gilman Avenue
- Adeline Street

Notwithstanding the above, the City reserves the right to review and comment on each individual traffic control plan based on its own merits.

Note: Routine maintenance, inconvenience to construction method or schedule, or adverse impacts on cost of work will generally not be accepted as grounds for exceptions.

END OF SECTION

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 5700

TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. General Conditions Document 00 7200
- B. Supplemental General Conditions Document 00 7201

1.02 SUMMARY

- A. This section describes the temporary controls required for the Project site. The Project site shall be maintained by Contractor as set forth in this section unless otherwise added to or superseded by the requirements of Document 00 7200 (General Conditions).

1.03 TEMPORARY CONTROLS

- A. Contractor shall obtain permits for, install and maintain in safe condition, whatever scaffolds, equipment, shoring, barricades, walkways, or other temporary structures which may be required to accomplish the Work. Such items shall be adequate for the intended use and shall be installed and maintained in accordance with all applicable State and local codes and regulations.
- B. The Contractor shall perform a pre-construction audio/video tape survey and provide supplemental photographic documentation to adequately document the condition of existing improvements. It is the responsibility of the Contractor to adequately document the condition of existing improvements and the Contractor may be held liable for any damage or condition whose pre-existence he/she is unable to document. No additional compensation for such tape survey and still photographs will be allowed.
- C. Upon notification of the City, the Contractor shall correct any deficiencies of the temporary controls within 72 hours. The City may request City crews or contract with another contractor to perform the necessary work and repairs if the deficiencies have not been corrected after the 72-hour notification. The Contractor shall pay the cost of the work performed by the City crews or other contractor plus an additional seventy percent (70%) surcharge by deduction from payment due on the contract.
- D. The Contractor shall begin cleanup operation at least one hour before the end of each day's work, clean all paved portions of the project and paved streets leading from the project that have dust-producing materials or debris deposited upon them. The work areas shall be swept clean at the end of each day's work and at other times when directed by the City.

1.04 DUST AND DEBRIS CONTROLS

- A. The Contractor shall be responsible for controlling dust in the air and rocks, debris, mud or dirt which are scattered as a result of his operations on the job. The Contractor shall be responsible for cleaning all mud, rock, dust, dirt, and debris-producing materials that originate in the project area and are deposited on other public or private property by truck tires, spillages, or by other means. The Contractor shall have suitable and adequate street cleaning equipment on the project site at all times.
- B. The Contractor shall endeavor, whenever possible, to restrict the use of water to control dust for his convenience in order to conserve water during drought situations or mandated rationing required by the Water Utility Company. Whenever flushing of streets or any other work is necessary, the Contractor shall provide filter materials at the catch

basin to retain any debris and dirt flowing into the City's drainage system.

- C. The cost of the above work, including the providing of barricades, water and other materials, labor, and equipment shall be at the sole cost and expense of the Contractor.
- D. The City may determine that an emergency exists when dust, rocks, debris, mud, or dirt are scattered in the public right of way or in the private properties as a result of Contractor's activities and/or deterioration of such conditions due to rain. The emergency conditions may also be declared when traffic or the Contractor's equipment travelling through a job causes dust to fly or rocks, debris, mud, or dirt to be scattered. Similar emergency conditions may be determined by the City's Representative if the storage of materials, tools, or any other equipment related to the project, in the public rights of way, is causing any obstruction or blocks access to the neighboring properties and/or dangerously placed without proper barricades and lights and/or backfill stockpiles or debris washing away into the street gutter and catch basins.

1.05 NOISE CONTROL

- A. Equipment which operates with noise levels in excess of 85 decibels measured on the A-weighted scale defined in ANSI S-1.4 at a distance of 100 feet from the equipment is prohibited.
- B. All equipment and impact tools shall have mufflers to comply with specified noise control.
- C. Use of unusually noisy equipment, such as jackhammers and roto-hammers is prohibited.
- D. Exterior construction work is limited to the hours of 8 AM to 5 PM.
- E. Cooperate with City if an ongoing construction activity becomes objectionable by its longevity, or by overlapping into an activity started later by the City. It is understood and agreed that both parties shall cooperate so that neither will be unduly inconvenienced by this requirement.
- F. Comply by requirements specified in the various sections.

1.06 CLEAN UP

- A. The Contractor shall not allow the site of the work to become littered with trash, rubbish, and waste material but shall maintain the same in a neat and orderly condition throughout the construction period. Cleanup, debris and dust control shall be a daily maintenance requirement. The City shall have the right to determine what is or is not trash, rubbish or waste material and the place and manner of disposal.
- B. The Contractor shall maintain a neat appearance to the work. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids and cleaning solutions from surfaces to prevent marring or other damage.
- C. Broken concrete debris, and unsuitable excavated native soil during construction shall be disposed of concurrently with its removal. If stockpiling is necessary all debris shall be placed in trash bins daily and shall be removed or disposed of weekly. Any waste shall not be buried on the site or disposed of into storm drains, sanitary sewers, streams, or waterways.
- D. Forms or falsework that are to be re-used shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be re-used shall be disposed of concurrently with their removal.
- E. Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.
- F. Sidewalks, street area, parking strips, and driveway approaches must be kept reasonably clean at all times during construction and be completely and carefully cleaned after the work has progressed beyond the immediate vicinity to the satisfaction of the City's

Representative. Reasonable cleanup is defined as no dust, rock, or mud on any portion of the public right-of-way or the private properties as a result of the Contractor's work.

1.07 EMERGENCY CLEAN UP WORK

- A. In any case in which the Contractor fails to satisfactorily complete the cleanup work described in this section, the City may determine that an emergency exists. In the event an emergency is determined by the City, the Contractor will be notified by the City to correct the violation immediately. The Contractor shall immediately make available manual labor or mechanical equipment capable of handling the cleaning process. During such an emergency, City forces may be called upon to complete the cleanup work, or the City may contract for the cleanup work. All construction work shall be shut down during this cleanup work by the City/contract forces. The City may shut down further construction work until the violations are corrected to the satisfaction of the City. The cost of the work performed by City/Contract forces plus an additional 70% surcharge shall be paid by the Contractor by deduction from payment due him on the contract. No compensation shall be given to the Contractor for stoppage of work.
- B. Such action by the City, however, shall not relieve the Contractor of his responsibility for any damages which may occur before, during or after such action has been taken by the City, and shall place no liability upon the City.

1.08 FINAL CLEAN UP

- A. Upon completion of the work, and before acceptance and final payment, the Contractor shall clean the project areas and remove all surplus and discarded materials, falsework, rubbish and temporary structures and restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work, and shall leave the improvement in a neat and presentable condition throughout the entire length of the improvement under contract to the satisfaction of the City. If the Conditions as noted above are not corrected immediately, the City may declare an emergency and take necessary action in accordance with the Emergency Cleanup Work section of this specification.

1.09 CLEAN UP AND SAFETY

- A. If the Contractor stockpiles granular material in the gutter, he must provide a minimum 4" pipe below the stockpile in the gutter to accommodate typical gutter flow. Any lumber or stockpiles on the site, not ready for immediate use, shall be free of nails or torn edges that may cause injury. Any materials stockpiled in the street and any open excavation shall have barricades equipped with operative automatic flashers placed at each end. The Contractor shall maintain a neat appearance at all times. All material removed shall be disposed of off-site in a legal manner.
- B. The Contractor must take special precautions to protect the public and City employees from bodily and property damage resulting from the work. Contractor must exercise all necessary precautions to ensure a safe execution of the work.

1.10 PROJECT SITE MAINTENANCE

- A. Water Pollution Control. The intent of these requirements is to enforce federal, state, and other local agencies' regulations that prohibit storm water pollution at construction sites. Storm drains discharge directly to creeks and the Bay without treatment, and discharge of pollutants (i.e., any substance, material, or waste other than uncontaminated storm water) into the storm drain system is strictly prohibited.
- B. The term "storm drain system" shall include storm water conduits, storm drain inlets and other storm drain structures, street gutters, channels, watercourses, creeks, lakes, and the San Francisco Bay.
- C. For the purpose of eliminating storm water pollution, the Contractor shall implement

effective control measures at construction sites. There are several publications that provide guidance on selecting and implementing effective control measures known as Best Management Practices (BMPs). BMPs include schedules of activities, prohibition of specific practices, general good housekeeping practices, operational practices, pollution prevention practices, maintenance procedures and other management procedures to prevent the discharge of pollutants directly or indirectly to the storm drain system. BMPs also include the construction of some facilities that may be required to prevent, control, and abate storm water pollution. The reference publications are as follows:

1. California Storm Water Best Management Practice Handbook - Industrial/Commercial
2. California Storm Water Best Management Practice Handbook - Construction Activity

These handbooks may be purchased from Blue Print Service (BPS), 1700 Jefferson St, Oakland, CA 94612.

3. Manual of Standards for Erosion and Sediment Control Measures by the Association of Bay Area Governments (ABAG).
4. Heavy Equipment Operation, Fresh Concrete & Mortar Application, Painting & Application of Solvents & Adhesives, Roadwork & Paving Activities, General Construction & Site Supervision, Parking Lots and Finish the Pour Right

These brochures are available at the Engineering Division, 1947 Center Street, 4th Floor, Berkeley, CA 94704.

1.11 STORMWATER POLLUTION CONTROL

- A. Stormwater Pollution Control. The intent of these requirements is to comply with federal, state, and other local agencies' regulations that prohibit non-stormwater discharges to storm drain sewer systems, creeks and San Francisco Bay. Storm drain sewers discharge directly to creeks and the Bay without treatment, and discharge of pollutants (any substance, material, or waste other than rainfall derived stormwater) into the storm drain sewer system is strictly prohibited. Further, the Contractor is informed that Federally Endangered species have been identified in creeks within the City Limits. The storm drain sewer system, pollutants, and other relevant information are further defined in Berkeley Municipal Code (BMC) Chapter 17.20 DISCHARGE OF NON-STORMWATER INTO CITY'S STORM DRAIN SYSTEM – REDUCTION OF STORMWATER POLLUTION, and the City's stormwater NPDES (National Pollutant Discharge Elimination System) Permit No. CAS612008. These documents are available upon request.
- B. Best Management Practices (BMP) and Source Control. The contractor shall use appropriate BMPs and source control techniques on the site(s) at all times, regardless of time of year or rainfall conditions, in order to prohibit the discharge of non-stormwater discharges into the storm drain sewer system, creeks, and Bay. BMPs shall be in conformance with the California Stormwater Quality Association's "Stormwater Best Management Practice Handbook", current edition.
- C. Water Pollution Control Plan (WPCP) and Coordinator. The Contractor shall prepare, submit for favorable review by the City, and implement a WPCP which shall contain at a minimum the items included in this section.
 1. The Contractor shall designate an individual (to be approved by the City) available at all times of sufficient authority to halt work and implement BMPs and source control measures for the Contractor and all sub-contractors, suppliers, and other personnel that may be at the construction site(s), to prevent non-stormwater discharges from the construction site(s). This individual shall be the contact person for all matters of the project regarding non-stormwater discharges.
 2. The WPCP shall show the locations of all storm drains, storm drain pipes, creeks, creek culverts, points of entry (catch basins, inlets, outlets), and other features

through which stormwater flows.

3. The WPCP shall identify each point of entry and show how each entry point will be protected. The WPCP shall include a protocol for allowing drainage to flow properly during rainfall events WHILE STILL PREVENTING non-stormwater discharges from entering the storm drains, creeks, and Bay.
4. The WPCP shall include descriptions and sketches of all BMPs, show locations and describe protocols for implementing and maintaining the following BMPs for but not limited to material storage, dewatering operations, bypass pumping, saw-cutting operations, pavement operations, concrete operations, grading and excavation operations, spill prevention and control, vehicle and equipment cleaning, vehicle and equipment operation and maintenance, litter control, dust control, pavement cleaning, and construction waste management.
5. All employees, subcontractors, suppliers, and any others involved with the construction site(s) shall be trained in implementing, the importance of, and purpose of the WPCP.
6. The WPCP shall be updated to meet changing stages of the construction site(s). Work shall not begin without the City completing its review and finding no exceptions taken on the WPCP and finding at City's sole discretion that the WPCP meets the intent and goals of the project.
7. In addition, the Contractor shall observe the following guidelines:
 - a. Paving during wet weather:
 - i. No paving while it is raining.
 - ii. No paving of the top lift of asphalt concrete (AC) on any day that experiences $\frac{1}{4}$ " of rain in a twenty-four period.
 - iii. No paving of bottom lift if previous seventy-two (72) hour period experienced more than $\frac{1}{2}$ " of rain, unless directed by the City Engineer or his designee.
 - b. Store materials as required by BMPs.
 - c. Cover inlets and manholes when applying asphalt, seal coat, tack coat, slurry seal, fog seal, etc., and while sawcutting, grooving, and grinding, etc.
 - d. Place drip pans or absorbent materials under equipment when not in use.
 - e. During wet weather, store paving equipment indoors or cover with tarp or other waterproof covering.
 - f. Sweep site daily to prevent sand, gravel or excess asphalt from entering or being transported by rain into the storm drain system.
 - g. Keep ample supplies of drip pans or absorbent materials on-site.
 - h. If paving involves Portland cement concrete:
 - i. Do not wash out concrete trucks into storm drains, open ditches, streets, streams, etc. The Contractor shall prevent the discharge of pollutants from concrete operations by using measures to prevent run-on and run-off pollution, properly disposing of wastes, and by implementing the following BMP's:
 - a. Store all materials in waterproof containers or under cover away from drain inlets or drainage areas.
 - b. Avoid mixing excess amounts of Portland cement materials. Dispose of any excess materials properly.
 - c. Whenever possible, perform washout of concrete trucks off-site where discharge is controlled and not permitted to discharge to the storm drain system.
 - ii. For on-site washout:
 - a. Locate washout area at least fifty (50) feet from storm drains, open ditches or other water bodies, preferably in a dirt area.

- b. Confine run-off from this area by constructing a temporary pit or bermed area large enough for the liquid and solid waste.
 - iii. Wash out concrete wastes into the temporary pit where the concrete can set, be broken up and then disposed of properly. If the volume of water is greater than what will allow concrete to set, allow the wash water to infiltrate and/or evaporate, if possible. Remove or vacuum the remaining silt and debris from the ponding or bermed area and dispose of it properly.
 - iv. Dispose of waste water from washing of exposed aggregate to dirt area. The dirt area shall be adequate to contain all the waste water and once the waste water has infiltrated, any remaining residue must be removed.
 - v. Collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the waste in trash container.
- D. Training. Contractor is responsible for ensuring all personnel, laborers, sub-contractors, suppliers, and any other personnel that are involved with the Work are trained in the importance of preventing non-stormwater discharges. Each worker shall be trained or certified as being trained before being allowed to work. Before any work begins, the Contractor shall submit and certify under penalty of perjury a list of all workers who have been trained on the importance of pollution prevention, BMP and source control operation and maintenance, and recognize the authority of the City to stop the work in the event of a non-stormwater discharge. The training shall include as a minimum, review of the BMP and WPCP, and all BMPs (including BMP operation and maintenance) that are planned for the Work.
- E. Enforcement. The City has the authority through this contract and appropriate sections of the BMC to enforce any portions of this section. City enforcement may include but is not limited to: citations, orders to abate, bills for City cleanup costs and administration, civil suits, and criminal charges and enforcement. Enforcement action by the City does not void or suspend any enforcement actions by other agencies, and actions by the City and other agencies shall be cumulative.
- F. Submittals and Contract Time. Contractor is cautioned and advised to have appropriately trained staff with any applicable certifications prepare all submittals for Storm Water Pollution Controls including the WPCP, and have appropriately trained staff available to meet with City staff to review the submittals. It is considered reasonable that the Contractor shall make a complete and acceptable submittal at least by the second submission. The City reserves the right to deduct monies from payments due Contractor to cover additional costs of City's and Architect/Engineer's review beyond the second submission. Illegible submittals will be rejected and returned to the Contractor.
- G. Payment. There shall be no separate pay item for complying with the provisions of this section, unless a separate pay item is provided in the bid schedule.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 7329**CUTTING AND PATCHING****PART 1 - GENERAL****1.01 SUMMARY**

- A. Contractor shall be responsible for all cutting, fitting, and patching required to complete the work and to:
 - 1. Make its several parts fit together properly,
 - 2. Uncover portions of the work to provide for installation of ill-timed work,
 - 3. Remove and replace defective work,
 - 4. Remove and replace work not conforming to requirements of Contract Documents,
 - 5. Provide routine penetrations of nonstructural surfaces for installation of electrical conduit, plumbing, and ductwork,
 - 6. Remove Samples of installed work as specified for testing.

1.02 SUBMITTALS

- A. Submit a written request to the Architect/Engineer two weeks in advance of executing any cutting or alteration that affects the following and is not specifically indicated on the Drawings as part of the Scope of Work:
 - 1. Work of the City or any separate contractor,
 - 2. The structural value or integrity of any element of the completed building,
 - 3. The integrity or effectiveness of weather-exposed or moisture-resistant elements or systems,
 - 4. The efficiency, operational life, maintenance, and safety of operational elements,
 - 5. The visual qualities of sight-exposed elements.
- B. The request shall include:
 - 1. The necessity for cutting or alteration,
 - 2. The effect on the work of the City or any separate contractor or on the structural or weatherproof integrity of the building,
 - 3. Description of the Proposed Work:
 - a. The scope of cutting, patching, alteration, or excavation,
 - b. The trades who will execute the work,
 - c. The products proposed to be used,
 - d. The extent of refinishing to be done.
 - 4. Alternatives to cutting and patching,
 - 5. Cost proposal, when applicable,
 - 6. Written permission of any separate contractor whose work will be affected.
- C. Should conditions of the work or the schedule indicate a change of products from the original installation, submit a request for substitution per Section 00 6325 Substitution Request Form.

PART 2 - PRODUCTS**2.01 MATERIALS**

- A. Comply with specifications and standards for each specific product involved.

PART 3 - EXECUTION**3.01 EXAMINATION**

- A. Examine existing conditions of the Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, examine the conditions affecting the installation of products or performance of the Work.
- C. Report unsatisfactory or questionable conditions to the Project Manager in writing. Do not proceed with the work until the Project Manager has provided further instructions.

3.02 PREPARATION

- A. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the work.
- B. Provide devices and methods to protect other portions of the Project from damage.
- C. Provide protection from the elements for that portion of the Project that may be exposed by cutting and patching work.

3.03 PERFORMANCE

- A. Execute cutting and demolition by methods that will prevent damage to other work and will provide proper surfaces to receive installation of repairs.
- B. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.
- C. All plumbing, mechanical, and electrical system elements shall be concealed, unless indicated otherwise.
- D. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.
- E. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes.
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish the entire unit.

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 7413**PROJECT CLEANING****PART 1 - GENERAL****1.01 SUMMARY**

- A. Maintain Project Site, surrounding areas and public properties free from accumulations of waste, debris, and rubbish, caused by operations.
- B. At completion of Work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave Project Site clean and ready for occupancy.

1.02 GENERAL

- A. Conduct cleaning and disposal operation in accord with legal requirements.
 - 1. Do not burn or bury rubbish and waste materials on Project Site.
 - 2. Do not dispose of volatile wastes in storm or sanitary drains.
- B. Hazards control:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes which create hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.

Note: Care shall be taken that discharge of volatile or noxious exhaust shall be shielded from air intakes of hospital mechanical systems.

1.03 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

1.04 DUST CONTROL

- A. Clean interior spaces prior to start of finish painting, and continue cleaning as required until painting is completed.

1.05 DURING CONSTRUCTION

- A. Execute cleaning daily to ensure Project Site, City's premises, adjacent and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to control dust.
- C. At reasonable intervals during progress of Work, clean Project Site and public properties, and dispose of waste materials, debris and rubbish.
- D. Provide on Project Site dump containers for collection of waste materials, debris and rubbish. Hospital waste containers shall not be used for construction waste.
- E. Remove waste materials, debris and rubbish from City's premises and legally dispose of off City's property.
- F. Vacuum clean interior areas when ready to receive finish painting, and continue vacuum cleaning on an as-needed basis until building is ready for substantial completion or

occupancy.

- G. Handle materials in a controlled manner with as few handlings as possible. Do not drop or throw materials.
- H. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

1.06 FINAL CLEANING

- A. Employ experienced workers, or professional cleaners for final cleaning.
- B. In preparation for Substantial Completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of accessible concealed spaces.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed finished surfaces; polish surfaces so designated to shine finish.
- D. Repair, patch and touch up marred surfaces to specified finish, and to match adjacent surfaces.
- E. Broom clean paved surfaces.
- F. Keep Project clean until it is occupied by the City.
- G. Clean equipment and fixtures to a sanitary condition.
- H. Clean or replace, if required, filters of operating equipment.
- I. Clean Debris from roofs, gutters, downspouts and drainage systems.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 7419**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

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

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging and recycling nonhazardous demolition and construction waste.
 - 2. Disposing of nonhazardous demolition and construction waste.
- B. Related Sections include the following:
 - 1. Division 01 Section "Temporary Facilities and Controls" for environmental-protection measures during construction.

1.03 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.04 PERFORMANCE REQUIREMENTS

- A. General: Develop waste management plan that results in end-of-Project rates for a minimum salvage/recycling percent by weight of total waste generated by the Work, as required by the Berkeley Municipal Code 19.37 Berkeley Green Code.
- B. Salvage/Recycle Goals: Owner's goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible.
 - 1. Demolition Waste:
 - a. Asphaltic concrete paving.
 - b. Concrete.
 - c. Concrete reinforcing steel.
 - d. Brick.
 - e. Concrete masonry units.

- f. Wood studs.
 - g. Wood joists.
 - h. Plywood and oriented strand board.
 - i. Wood paneling.
 - j. Wood trim.
 - k. Structural and miscellaneous steel.
 - l. Rough hardware.
 - m. Roofing.
 - n. Insulation.
 - o. Doors and frames.
 - p. Door hardware.
 - q. Windows.
 - r. Glazing.
 - s. Metal studs.
 - t. Gypsum board.
 - u. Acoustical tile and panels.
 - v. Carpet.
 - w. Carpet pad.
 - x. Demountable partitions.
 - y. Equipment.
 - z. Cabinets.
 - aa. Plumbing fixtures.
 - bb. Piping.
 - cc. Supports and hangers.
 - dd. Valves.
 - ee. Sprinklers.
 - ff. Mechanical equipment.
 - gg. Refrigerants.
 - hh. Electrical conduit.
 - ii. Copper wiring.
 - jj. Lighting fixtures.
 - kk. Lamps.
 - ll. Ballasts.
 - mm. Electrical devices.
 - nn. Switchgear and panelboards.
 - oo. Transformers.
2. Construction Waste:
- a. Site-clearing waste.
 - b. Masonry and CMU.
 - c. Lumber.
 - d. Wood sheet materials.
 - e. Wood trim.
 - f. Metals.
 - g. Roofing.
 - h. Insulation.
 - i. Carpet and pad.
 - j. Gypsum board.
 - k. Piping.
 - l. Electrical conduit.
 - m. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1. Paper.
 - 2. Cardboard.
 - 3. Boxes.
 - 4. Plastic sheet and film.

5. Polystyrene packaging.
6. Wood crates.
7. Plastic pails.

1.05 SUBMITTALS

- A. Waste Management Plan: Submit plan within **7** days of date established for the Notice to Proceed. The City uses Green Halo Tracking. Contractor shall be responsible for tracking construction waste through Green Halo at www.berkeley.wastetracking.com .
- B. See Evaluations for example of Waste Reduction Progress Reports in paragraph below.
- C. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit a copy of Green Halo reporting. Include the following information:
 1. Material category.
 2. Generation point of waste.
 3. Total quantity of waste in tons
 4. Quantity of waste salvaged, both estimated and actual in tons
 5. Quantity of waste recycled, both estimated and actual in tons
 6. Total quantity of waste recovered (salvaged plus recycled) in tons
 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- D. Waste Reduction Calculations: Before request for Substantial Completion, submit **3** copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- E. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- F. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- G. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- H. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.06 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: Green Building Professional. Waste management coordinator may also serve as Green Building coordinator.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

1.07 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged,

recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

D.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by Construction Manager. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 1. Comply with Division 01 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 1. Distribute waste management plan to all relevant sub-contractor within 3 days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 2. Comply with Division 01 Section "Temporary Facilities and Temporary Controls" for controlling dust and dirt, environmental protection, and noise control.

3.02 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until installation.
 - 4. Protect items from damage during transport and storage.
 - 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
- B. Salvaged Items for Owner's Use:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's storage area.
 - 5. Protect items from damage during transport and storage.
- C. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.

3.03 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Receivers and Processors: List below is provided for information only; available recycling receivers and processors include, but are not limited to, the following
 - The City of Berkeley Transfer Station
 - 1201 Second Streets, Berkeley, CA
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - 4. Store components off the ground and protect from the weather.
 - 5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.04 RECYCLING DEMOLITION WASTE

- A. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

- C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 - 1. Clean and stack undamaged, whole masonry units on wood pallets.
- D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
 - 1. Treated Wood Waste: Treated wood waste is required to be managed, stored, transported, and disposed of as hazardous waste per California State regulations. Treated wood waste is required to be transported and disposed of at a Class I hazardous waste landfill by a Hazardous Waste contractor.
- E. Metals: Separate metals by type.
 - 1. Structural Steel: Stack members according to size, type of member, and length.
 - 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- F. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- G. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
- H. Plumbing Fixtures: Separate by type and size.
- I. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- J. Lighting Fixtures: Separate lamps by type and protect from breakage.
- K. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.
- L. Conduit: Reduce conduit to straight lengths and store by type and size.

3.05 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees.
- C. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
 - 3. Treated Wood Waste: Treated wood waste is required to be managed, stored, transported, and disposed of as hazardous waste per California State regulations. Treated wood waste is required to be transported and disposed of at a Class I hazardous waste landfill by a Hazardous Waste contractor.
- D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.06 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 7700**CONTRACT CLOSEOUT****PART 1 - GENERAL****1.01 SUMMARY**

A. Section describes requirements and procedures for:

1. Project cleaning.
2. Testing of equipment and systems
3. Substantial Completion
4. Final Completion
5. Close Out
6. Warranties

1.02 SUBSTANTIAL COMPLETION

A. Removal of Temporary Construction Facilities and Project Cleaning.

1. Prior to Substantial Completion inspection: remove temporary materials, equipment, services, and construction; clean all areas affected by the Work; clean and repair damage caused by installation or use of temporary facilities; restore permanent facilities used during construction to specified condition.

B. Equipment and Systems.

1. Prior to Substantial Completion, Contractor shall start up, run for periods prescribed by City, operate, adjust and balance all manufactured equipment and Project systems, including but not limited to, mechanical, electrical, safety, fire, and controls.
2. Demonstrate that such equipment and systems conform to contract standards and manufacturer's guarantees. Where applicable, use testing protocols specified, and if the contract is silent, then consistent with manufacturer's recommendations and industry standards.

C. Procedure for Substantial Completion

1. When Contractor considers Work or designated portion of the Work as Substantially Complete, submit written notice to City, with list of items remaining to be completed or corrected and explanation of why such items do not prevent City's beneficial use and occupancy of the Work for its intended purposes. Within reasonable time, City will inspect to determine status of completion.
2. Should City determine that Work is not Substantially Complete, City will promptly notify Contractor in writing, listing all defects and omissions. Contractor shall remedy deficiencies and send a second written notice of Substantial Completion. City will reinspect the Work. If deficiencies previously noted are not corrected on reinspection, then pay the cost of the reinspection.
3. When City concurs that Work is Substantially Complete, City will issue a written notice or certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified by City.
4. Manufactured units, equipment and systems that require startup must have been

started up and before a notice or certificate of Substantial Completion will be issued.

5. A punch list examination will be performed upon Substantial Completion. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the Work by Contractor, Contractor will reimburse City for costs associated with these visits.

1.03 FINAL COMPLETION

A. Requirements

1. Final Completion occurs when Work meets requirements for City's Final Acceptance.

B. Procedure

1. When Contractor considers Work is Finally Complete, submit written certification that:
 - a. Contractor has inspected Work for compliance with Contract Documents, and all requirements for Final Acceptance have been met.
 - b. Except for Contractor maintenance after Final Acceptance, Work has been completed in accordance with Contract Documents and deficiencies listed with Certificate of Substantial Completion have been corrected. Equipment and systems have been tested in the presence of City, and are operative.
 - c. Project Record Documents are completed and turned over to City, and Work is complete and ready for final inspection.
2. In addition to submittals required by Contract Documents, provide submittals required by governing authorities and submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
3. Should City determine that Work is incomplete or Defective, City promptly will so notify Contractor, in writing, listing the incomplete or Defective items. Contractor shall promptly remedy the deficiencies and notify the City when it is ready for reinspection.

C. Final Adjustments of Accounts:

1. Submit a final statement of accounting to City, showing all adjustments to the Contract Sum and complete and execute Document 00 6530 (Agreement and Release of Claims).
2. If so required, City shall prepare a final Change Order for submittal to Contractor, showing adjustments to the Contract Sum that were not previously made into a Contract Modification.

D. Warranties

1. Execute Contractor's Submittals and assemble warranty documents, and Installation, Operation, and Maintenance Manuals, executed or supplied by Subcontractors, suppliers, and manufacturers. Provide table of contents and assemble in 8½ inches by 11 inches three-ring binder with durable plastic cover, appropriately separated and organized. Assemble in Specification Section order.
2. Submit material prior to final Application for Payment. For equipment put into use with City's permission during construction, submit within 14 calendar days after first operation. For items of Work delayed materially beyond Date of Substantial Completion, provide updated Submittal within 14 calendar days after acceptance, listing date of acceptance as start of warranty period.
3. Warranty Forms: Submit drafts to Owner for approval prior to execution. Forms shall not detract from or confuse requirements or interpretations of Contract Documents. Warranty shall be countersigned by manufacturers. Where specified, warranty shall be countersigned by Subcontractors and installers.

4. Rejection of Warranties: Owner reserves right to reject unsolicited and coincidental product warranties that detract from or confuse requirements or interpretations of Contract Documents.
 5. Term of Warranties: For materials, equipment, systems, and workmanship, warranty period shall be one year minimum from date of Final Completion of entire Work except where:
 - a. Detailed Specifications for certain materials, equipment or systems require longer warranty periods.
 - b. Materials, equipment or systems are put into beneficial use of City prior to Final Completion as agreed to in writing by City.
- E. Warranty of Title:
1. No material, supplies, or equipment for Work under Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with improvements and appurtenances constructed or placed thereon by Contractor, to City free from any claim, liens, security interest, or charges, and further agrees that neither Contractor nor any person, firm, or corporation furnishing any materials or labor for any Work covered by Contract shall have right to lien upon premises or improvement or appurtenances thereon. Nothing contained in this paragraph, however, shall defeat or impair right of persons furnishing materials or labor under bond given by Contractor for their protection or any rights under law permitting persons to look to funds due Contractor in hands of City.
- F. Turn-In. Contract Documents will not be closed out and final payment will not be made until all keys issued to Contractor during prosecution of Work and letters from property owners, pursuant to Contract Documents, are turned in to City.
- G. Release of Claims. Contract Documents will not be closed out and final payment will not be due or made until Document 00 6530 (Agreement and Release of Claims) is completed and executed by Contractor and City.
- H. Fire Inspection Coordination. Coordinate fire inspection and secure sufficient notice to City to permit convenient scheduling (if applicable).
- I. Building Inspection Coordination. Coordinate with City a final inspection for the purpose of obtaining an occupancy certificate (if applicable).

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01 7800**CLOSEOUT SUBMITTALS****PART 1 - GENERAL****1.01 SUMMARY**

- A. This section specifies administrative and procedural requirements for Project Record Documents.
- B. Project Record Documents required include:
 - 1. Marked-up copies of Contract Drawings
 - 2. Marked-up copies of Shop Drawings
 - 3. Newly prepared Drawings
 - 4. Marked-up copies of Specifications, Addenda and Change Orders
 - 5. Marked-up Project Data submittals
 - 6. Record Samples
 - 7. Field records for variable and concealed conditions
 - 8. Record information on Work that is recorded only schematically
- C. Specific Project Record Documents requirements that expand requirements of this Section are included in the individual Sections of Divisions 1 through 33.
- D. General Project closeout requirements are included in Section 01 7700, "Contract Closeout."
- E. Maintenance of Documents and Samples:
 - 1. Store Project Record Documents and samples in the field office apart from Contract Documents used for construction.
 - 2. Do not permit Project Record Documents to be used for construction purposes.
 - 3. Maintain Project Record Documents in good order, and in a clean, dry, legible condition.
 - 4. Make documents and samples available at all times for inspection by Architect and Project Manager.
- F. City will provide one set of sepias and one blueline set of the construction drawings and one project manual for the Contractor's use and copying during construction.

1.02 PROJECT RECORD DRAWINGS

- A. Mark-up Procedure: During the construction period, maintain a set of blueline or blackline prints of Contract Drawings and Shop Drawings for Project Record Document purposes. Label each document (on first sheet or page) "PROJECT RECORD" in 2 in. high printed letters. Keep record documents current. Note: A reference by number to a Change Order, RFI, RFQ, Field Order or other such document is not acceptable as sufficient record information on any record document. Do not permanently conceal any Work until required information has been recorded.
 - 1. Mark these Drawings to indicate the actual installation where the installation varies appreciably from the installation shown originally. Give particular attention to

information on concealed elements which would be difficult to identify or measure and record later. Items required to be marked include but are not limited to:

- a. Dimensional changes to the Drawings
 - b. Revisions to details shown on the Drawings
 - c. Depths of various elements of foundation in relation to main floor level or survey datum.
 - d. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 - e. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - f. Establish locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, and similar items.
 - g. Provide actual numbering of each electrical circuit.
 - h. Field changes of dimension and detail.
 - i. Revisions to routing of piping and conduits
 - j. Revisions to electrical circuitry
 - k. Actual equipment locations
 - l. Duct size and routing
 - m. Changes made by Change Order
 - n. Details not on original Contract Drawings
2. Mark completely and accurately Project Record Drawing prints of Contract Drawings or Shop Drawings, whichever is the most capable of showing actual physical conditions. Where Shop Drawings are marked, show cross-reference on Contract Drawings location.
 3. Mark Project Record Drawing sets with red erasable colored pencil; use other colors to distinguish between changes for different categories of the Work at the same location.
 4. Mark important additional information which was either shown schematically or omitted from original Drawings.
 5. Note construction change directive numbers; alternate numbers; Change Order numbers and similar identification.
 6. Responsibility for Mark-up: Where feasible, the individual or entity who obtained Project Record Drawing data, whether the individual or entity is the installer, subcontractor, or similar entity, is required to prepare the mark-up on Project Record Drawings.
 - a. Accurately record information in an understandable and legible drawing technique.
 - b. Record data as soon as possible after it has been obtained. In the case of concealed installations, record and check the mark-up prior to concealment.
- B. Preparation of Transparencies: Immediately prior to inspection for Certification of Substantial Completion, review completed marked-up Project Record Drawings with the Project Manager]. When authorized, prepare a full set of correct transparencies of Contract Drawings and Shop Drawings.
1. Incorporate changes and additional information previously marked on print sets. Erase, redraw, and add details and notations where applicable. Identify and date each Drawing; include the printed designation "PROJECT RECORD DRAWINGS" in a prominent location on each Drawing.
 2. Refer instances of uncertainty to the Project Manager for resolution.
 3. Review of Transparencies: Before copying and distributing, submit corrected

transparencies and the original marked-up prints to the Project Manager and Architect/Engineer for review.

- a. Transparencies and the original marked-up prints will be returned to the Contractor for organizing into sets, printing, binding, and final submittal.
4. Copies and Distribution: After completing the preparation of transparency Project Record Drawings, print three blue-line or black-line prints of each Drawing, whether or not changes and additional information were recorded. Organize the copies into manageable sets. Bind each set with durable paper cover sheets, with appropriate identification, including titles, dates and other information on cover sheets.
 - a. Organize and bind original marked-up set of prints that were maintained during the construction period in the same manner.
 - b. Organize Project Record Drawings transparencies into sets matching the print sets. Place these sets in durable tube-type drawing containers with end caps. Mark the end cap of each container with suitable identification.
- C. Distribution of Marked up Drawings and Transparencies
 1. Submit the marked-up Project Record Drawings set, pdfs, transparencies, and five copy sets to the Project Manager for City's records.
- D. Shop Drawings and Samples: Maintain as record documents; legibly annotate Shop Drawings and Samples to record changes made after review.
- E. In addition to requirements of this Section, comply with supplemental requirements of Divisions 21 and 28 and Division 33.
 1. Divisions 21 through 28 and Division 33 of the specifications require the preparation of large scale, detailed Layout Drawings of the work of those divisions. These Layout Drawings are not shop drawings as defined by the General Conditions, but together with shop drawing or Layout Drawings of all other affected sections are used check, coordinate and integrate the work of the various sections
 2. Include these Layout Drawings as part of the As Built Documents.
- F. Delete Architect/Engineer title block and seal from documents.
- G. As-Built Documents are subject to review and acceptance by the City and Architect/Engineer.
- H. Submit documents to Project Manager with final Application for payment.

1.03 PROJECT RECORD SPECIFICATIONS

- A. During the construction period, maintain one copy of the Project Specifications, including addenda and modifications issued, for Project Record Document purposes.
 1. Mark the Project Record Specifications to indicate the actual installation where the installation varies substantially from that indicated in Specifications and Modifications issued. Note related Project Record Drawing information, where applicable. Give particular attention to substitutions, selection of product options, change order work, and information on concealed installation that would be difficult to identify or measure and record later.
 - a. In each Specification Section where products, materials or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
 - b. Record the name of the manufacturer, catalog number, supplier and installer, and other information necessary to provide a record of selections made and to document coordination with Project Record Product Data submittals and maintenance manuals.

- c. Note related Project Record Product Data, where applicable, for each principal product specified, indicate whether Project Record Product Data has been submitted in maintenance manual instead of submitted as Project Record Product Data.
2. Upon completion of mark-up, submit Project Record Specifications to the Project Manager for City's records.

1.04 PROJECT RECORD PRODUCT DATA

- A. During the construction period, maintain one copy of each Project Record Product Data submittal for Project Record Document purposes.
 1. Mark Project Record Product Data to indicate the actual product installation where the installation varies substantially from that indicated in Project Record Product Data submitted. Include significant changes in the product delivered to the site, and changes in manufacturer's instructions and recommendations for installation.
 2. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 3. Note related Change Orders and mark-up of Project Record Drawings, where applicable.
 4. Upon completion of mark-up, submit a complete set of Project Record Product Data to the Project Manager for City's records.
 5. Where Project Record Product Data is required as part of maintenance manuals, submit marked-up Project Record Product Data as an insert in the manual, instead of submittal as Project Record Product Data.
 6. Each prime Contractor is responsible for mark-up and submittal of record Project Record Product Data for its own Work.
- B. Material, Equipment and Finish Data
 1. Provide data for primary materials, equipment and finishes as required under each specification section.
 2. Submit two sets prior to final inspection, bound in 8-1/2 inches by 11 inches three-ring binders with durable plastic covers; provide typewritten table of contents for each volume.
 3. Arrange by Specification division and give names, addresses, and telephone numbers of subcontractors and suppliers. List:
 - a. Trade names.
 - b. Model or type numbers.
 - c. Assembly diagrams.
 - d. Operating instructions.
 - e. Cleaning instructions.
 - f. Maintenance instructions.
 - g. Recommended spare parts.
 - h. Product data.

1.05 MISCELLANEOUS PROJECT RECORD SUBMITTALS

- A. Refer to other Specification Sections for miscellaneous record keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to the Project Manager for City's records. Categories of requirements resulting in miscellaneous records include, but are not limited to the following:

1. Field records on excavations and foundations
2. Field records on underground construction and similar work
3. Survey showing locations and elevations of underground lines
4. Invert elevations of drainage piping
5. Surveys establishing building lines and levels
6. Authorized measurements utilizing unit prices or allowances
7. Records of plant treatment
8. Ambient and substrate condition tests
9. Certifications received in lieu of labels on bulk products
10. Batch mixing and bulk delivery records
11. Testing and qualification of tradespersons
12. Documented qualification of installation firms
13. Load and performance testing
14. Inspections and certifications by governing authorities
15. Leakage and water-penetration tests
16. Fire resistance and flame spread test results
17. Final inspection and correction procedures

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 RECORDING

- A. Post changes and modifications to the Documents as they occur. Do not wait until the end of the Project. City may review Project Record Documents prior to each progress payment to see that the required information is being properly and faithfully recorded to assure compliance with this requirement. If Contractor has not complied with this requirement, the progress payment will be withheld until the Record Documents have been brought up to date.

3.02 SUBMITTAL

- A. At completion of Project, deliver Record Documents to Project Manager.
- B. Accompany submittal with transmittal letter containing:
 1. Date
 2. Project title and number
 3. Contractor's name and address
 4. Number and title of each record documents
 5. Certification that each document as submitted is complete and accurate, and signature of Contractor, or his authorized representative.

END OF SECTION

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SPECIFICATIONS

for

FIRE STATION NO. 6 REMODEL

999 Cedar Street
Berkeley, CA 94710

May 2025

Prepared by

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urban design

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SECTION 02 41 19 SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Selective demolition and removal of portions of the existing building and site improvements as indicated and as required to perform the work.

1.2 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be salvaged or to remain the Owner's property.
- B. Remove and Salvage: Items indicated to be removed and salvaged remain the Owner's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and bring to Owner's designated storage area within the building.
- C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in locations indicated. Comply with additional requirements specified in other Sections.
- D. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Owner, items may be removed to a suitable, protected storage location during selective demolition and then reinstalled in their original locations.

1.3 MATERIALS OWNERSHIP

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

1.4 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Photographs or video, sufficiently detailed, of existing conditions, of adjoining construction, and site improvements that might be misconstrued as damage caused by selective demolition operations.

1.5 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed selective demolition work like that required for this Project.
- B. Regulatory Requirements: Comply with the hauling and disposal regulations of authorities having jurisdiction. Comply with noise and dust regulations of authorities having jurisdiction.
- C. Pre-Demolition Conference: Conduct conference at the Project site. Review methods and procedures related to building demolition including, but not limited to, the following:
 - 1. Inspect and discuss the condition of items to be demolished.
 - 2. Review and finalize schedule and verify availability of equipment, personnel, and facilities required.
 - 3. Review areas where existing construction is to remain and requires protection.
 - 4. Review methods for removing materials from the site.
 - 5. Review staging area for materials on the site.

1.6 PROJECT CONDITIONS

- A. Owner assumes no responsibility for the actual condition of buildings or site improvements to be selectively demolished. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Hazardous Materials: It is not expected that asbestos or other hazardous materials will be encountered in the demolition work. If any materials suspected of containing asbestos or other hazardous materials are encountered, do not disturb the materials. Immediately notify the Architect and the Owner. The Owner will arrange to have hazardous materials removed under a separate contract.
- C. Storage or sale of removed items or materials on-site will not be permitted.
- D. Prior to removal of existing roofing membrane, verify the existing roofing materials do not contain asbestos or other harmful materials that require special abatement measures.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- B. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Owner's Representative.
- D. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.

3.2 UTILITY SERVICES

- A. Maintain existing utilities in service and protect them against damage during selective demolition operations.
- B. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving building to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with utility companies.
 - 2. Where utility services are required to be removed, relocated, or abandoned, provide bypass connections to maintain continuity of service to other parts of the building before proceeding with selective demolition.
 - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit after bypassing.

3.3 PREPARATION

- A. Conduct demolition operations and remove debris to ensure minimum interference with streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic paths if required by governing regulations.
- B. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
 - 1. Protect walls, ceilings, floors and other existing finish work that are to remain and are exposed during selective demolition operations.

3.4 POLLUTION CONTROLS

- A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.
 - 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions.
- B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to the condition existing before start of selective demolition.

3.5 SELECTIVE DEMOLITION

- A. Demolish and remove existing construction and site improvements only to the extent required by new construction and as indicated. Use methods required to complete work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 3. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 4. Dispose of demolished items and materials promptly. On-site storage of removed items is prohibited.
 - 5. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.
- B. Salvaged Items:
 - 1. Refer to Drawings for salvaged items.
 - 2. Sort and organize salvaged materials as they are removed from the structure.
 - 3. Store items in a secure and weather protected area until removed from the site or transferred to Owner.
 - 4. Transport items to Owner's storage area designated by the Owner.
 - 5. Protect items from damage during transport and storage.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition activities. When permitted by the Architect, items may be removed to a suitable, protected storage location during demolition and cleaned and reinstalled in their original locations after demolition operations are complete.
- D. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain, using power-driven masonry saw or hand tools; do not use power-driven impact tools.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled or otherwise indicated to remain Owner's property, remove demolished materials from the Project site and legally dispose of them.
 - 1. Do not allow demolished materials to accumulate on site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of the building by chute, hoist or other device that will convey debris to grade level in a controlled descent.

3.7 CLEANING

- A. Sweep the site and the building broom clean on completion of selective demolition operation.

END OF SECTION

SECTION 05 50 00 METAL FABRICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing metal fabrications made from steel shapes, plates, bars, strips, tubes, pipes and castings not a part of structural steel or specified in other Sections, including but not limited to the following items:
1. Handrail brackets.
 2. Guardrails, railings and handrails.
 3. Steel pipe bollards.
 4. Stair nosings.
 5. Miscellaneous angles, plates, bars, rods and other items not specified in other Sections but shown or required to complete the work.
- B. Related Sections:
1. Exterior finish carpentry is specified in Section 06 20 13.
 2. Painting is specified in Section 09 91 00.

1.2 SYSTEM PERFORMANCE REQUIREMENTS

- A. Guardrails, Railings and Handrails: Design, engineer, fabricate and install guardrails, railings and handrails to withstand the following structural loads:
1. Top Rail of Railing System: Capable of withstanding a lateral load of 50-psf applied horizontally at right angles to the top rail.
 2. Handrails: Capable of withstanding a load of 200-psf applied at any direction and point along the handrail.
 3. Handrails and Railings shall comply with ADA requirements.

1.3 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
1. Product Data: Include information on paint products and grout.
 2. Shop Drawings: Include plans, elevations and details of metal fabrications and their connections. Show anchorage and accessory items. Furnish templates for anchors and bolts installed under other Sections.
 3. Samples: Two 6-inch-long x 1-inch square and round metal shapes welded together at a 90-degree angle showing quality of welds exposed to view in the completed work.

1.4 QUALITY ASSURANCE

- A. Stairway handrails shall comply with California Building Code (CBC) Section 11B-505 and 1012.
- B. Ramp handrails shall comply with CBC Section 11B-505 and 1012.
- C. Ramp guardrails shall comply with CBC Section 11B-505 and 1013.
- D. Fabricator Qualifications: Firm experienced in successfully producing metal fabrications like that indicated for this Project, with sufficient production capacity to produce required units without causing delay in the work.
- E. Welding Qualifications: Qualify welding processes and welding operators in accordance with AWS D1.1, D1.2, and D1.3 as applicable. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Check actual locations of walls and other construction to which metal fabrications must fit, by accurate field measurements before fabrication. Show recorded measurements on shop drawings. Coordinate fabrication schedule to avoid delays of work.

1.6 SEQUENCING AND SCHEDULING

- A. Mount handrails only on exterior cement plaster wall assemblies reinforced to receive anchors, and where the location of concealed anchor plates has been marked for the installer.
- B. Painting: Items specified in this Section as having a shop applied prime coat and exposed to view in the completed Project will be job painted as specified in Section 09 91 00, unless otherwise noted.

PART 2 - PRODUCTS

2.1 FERROUS METALS

- A. General: For fabrication of metal work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness.
- B. Steel Plates, Shapes and Bars: ASTM A36.
- C. Steel Tubing: Cold-formed, ASTM A500; or hot-rolled, ASTM A501.
- D. Structural Steel Sheet: Hot-rolled, ASTM A570; or cold-rolled ASTM A611, Class 1.
- E. Galvanized Structural Steel Sheet: ASTM A653, galvanized in accordance with ASTM A525, G90 coating designation.
- F. Steel Pipe: ASTM A53; type and grade selected by fabricator; black finish unless galvanizing is indicated or specified; standard weight, schedule 40, unless otherwise indicated.
- G. Gray Iron Castings: ASTM A48, Class 30.
- H. Malleable Iron Castings: ASTM A47, grade selected by fabricator.

2.2 FASTENERS

- A. Bolts and Nuts: Regular hexagon-head bolts, ASTM A307, Grade A, with hex nuts, ASTM A563, and flat washers.
- B. Machine Screws: ANSI B18.6.3.
- C. Lag Bolts: ANSI B18.2.1.
- D. Wood Screws: Flat head, carbon steel, ANSI B18.6.1.
- E. Plain Washers: Round, carbon steel, ANSI B18.22.1.
- F. Lock Washers: Helical, spring type, carbon steel, ANSI B18.21.1.
- G. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry and equal to 4 times the load imposed when installed in concrete, determined in accordance with ASTM E448.

2.3 GROUT

- A. Non-Shrink Non-Metallic Grout: Euclid Chemical Co. "Euco N-S Grout", L&M Construction Chemicals, Inc. "Crystex", Master Builders Technologies, Inc. "Masterflow 928 and 713" or approved equal.

2.4 PAINT

- A. Metal Primer: SSPC 20, Type 2; VOC-compliant.
 - 1. Interior exposed to view items to be field painted shall be primed with a primer compatible with final finish coats specified in Section 09 91 00.
- B. Galvanizing Repair Paint: VOC-compliant, high zinc dust content paint for re-galvanizing welds in galvanized steel; Rust-Oleum Corp. "Zinc-Rich Cold Galvanizing Compound", Tnemec 90-93, ZRC Worldwide "Galvalite" or approved equal.

2.5 FABRICATION, GENERAL

- A. Workmanship:
 - 1. Use materials of size and thickness indicated or required to produce strength and durability in finished product for use intended.
 - 2. Work to dimensions indicated,
 - 3. Form exposed work true to line and level with accurate angles and surfaces and straight, sharp edges.
 - 4. Ease exposed edges to a radius of approximately 1/32-inch, unless otherwise indicated.
 - 5. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
 - 6. Weld corners, intersections, and seams continuously, complying with AWS recommendations. At exposed connections, grind welds smoothly and flush to match and blend with adjoining surfaces. Welds shall be imperceptible in the finished work and shall comply with National Ornamental & Miscellaneous Metals Association (NOMMA) Finish #1 and the approved welding sample.
 - 7. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use Phillips flat-head countersunk screws or bolts for exposed fasteners unless tamperproof security screws are indicated.
 - 8. Cut, reinforce, drill and tap miscellaneous metal work as indicated to receive finish hardware and similar items.
- B. Galvanizing: Provide zinc coating for all exterior items exposed to the elements, as follows:
 - 1. ASTM A153 for galvanizing iron and steel hardware.
 - 2. ASTM A123 for galvanizing both fabricated and un-fabricated iron and steel products made of uncoated rolled, pressed, and forged shapes, plates, bars, and strip 0.0299-inch thick and heavier.
- C. Fabricate joints exposed to the weather to exclude water or provide weep holes.
- D. Shop Painting:
 - 1. Shop paint interior miscellaneous metal work, except members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded, and galvanized surfaces.
 - 2. Remove scale, rust and other deleterious materials before applying shop coat. Clean off heavy rust and loose mill scale in accordance with SSPC SP-2, SP-3, or SP-7.
 - 3. Remove oil, grease and similar contaminants in accordance with SP-1.
 - 4. Brush or spray on primer in accordance with manufacturer's instructions, at a rate of 2.0-mils thickness for each coat.
 - 5. Apply one shop coat to fabricated metal items, except apply 2-coats to inaccessible surfaces after assembly or erection. Change color of second coat to distinguish from the first.
 - 6. Primer on exposed to view items to be field painted shall be smooth and suitable for application of final finish coats specified in Section 09 91 00.
 - 7. Apply a heavy coat of bituminous paint, compounded for application in 30-mil coat, to metal surfaces in contact with concrete, masonry and dissimilar metals. Do not apply on exposed surfaces.

2.6 MISCELLANEOUS METAL FABRICATIONS

- A. Steel Guardrails, Railings and Handrails: Fabricate to design, dimensions and details indicated. Railings and handrails shall comply with ADA requirements.
 - 1. Interconnect railing and handrail members by butt welding or welding with internal connectors.
 - 2. Provide coped joints at tee and cross sections.

3. Form simple and compound curves by bending tubing in jigs to produce uniform curvature for each repetitive configuration. Maintain cylindrical cross-section of tube throughout entire bend without buckling, twisting or deforming exposed surfaces.
 4. Provide wall returns at ends of wall-mounted handrails.
 5. Close exposed ends of tubing by welding 3/16-inch steel plate in place or by using prefabricated fittings.
 6. Flanges, Fittings and Anchors: Provide end closures, flanges, miscellaneous fittings and anchors for interconnections of tubing and attachment of railings and handrails to other work. Furnish inserts and other anchorage devices for connecting to concrete or masonry.
 7. Provide Ipe wood guardrail cap and handrail as indicated and as specified in Section 06 20 13.
 8. Provide 1/4-inch diameter 1x19 Type 316 mill finish stainless steel cable infill complete with ferrules, tensioners, installation accessories and fasteners.
 9. Finish: Galvanize exterior steel guardrails, railings and handrails, including tubing, fittings, brackets, fasteners, and other ferrous components. Guardrails, railings and handrails will be field painted as specified in Section 09 91 00.
- B. Steel Pipe Bollards: Fabricate bollards from galvanized steel pipe of diameter and height indicated. Embed in concrete footings, fill with concrete and close top end by welding a 1/4-inch steel plate in place or provide a smooth concrete domed cap. Finish with a powder coat in color to match color sample furnished by the Architect.
- C. Abrasive Stair Nosings: American Safety Tread Co., Inc. Type T-24, Wooster Products, Inc. "Spectra" Type WP24A or approved equal, color as selected by the Architect. Provide contrasting color at all treads at exterior treads

PART 3 - EXECUTION

3.1 PREPARATION

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as concrete inserts, sleeves, anchor bolts and miscellaneous items having integral anchors.

3.2 INSTALLATION

- A. General:
1. Fastening to In Place Construction: Provide threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws and other connectors as required.
 2. Cutting, Fitting and Placement:
 - a. Perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications.
 - b. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels.
 - c. Provide temporary bracing or anchors in formwork for items to be built into concrete, masonry or similar construction.
 3. Fit exposed connections together forming tight hairline joints.
 - a. Weld connections not shop-welded.
 - b. Grind exposed joints smooth and imperceptible, and touch-up shop paint coat.
 - c. Do not weld, cut or abrade the surfaces of exterior units which have been hot-dip galvanized after fabrication, and intended for bolted or screwed field connections.
 4. Field Welding: Comply with AWS for procedures of manual shielded metal-arc welding, appearance and quality of welds, and methods used in correcting welding work.
- B. Steel Guardrails, Railings and Handrails:
1. Adjust railings prior to anchoring to ensure matching alignment at abutting joints.
 2. Space posts as indicated.
 3. Plumb posts in each direction.
 4. Secure handrails to the wall with wall brackets and end fittings.
 - a. Locate brackets as indicated.
 - b. Secure wall brackets in accordance with manufacturer's instructions.

5. Expansion Joints: Provide at intervals not exceeding 40-feet. Provide slip joint with internal sleeve extending 2-inches beyond joint on either side; fasten internal sleeve securely to one side; locate joint within 6-inches of posts.

3.3 ADJUST AND CLEAN

- A. Touch-Up Painting: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material used for shop painting. Apply by brush or spray to provide a minimum dry film thickness of 2.0-mils.
- B. Galvanized Surfaces: Clean field welds, bolted connections and abraded areas and spot prime with specified primer applied to a minimum dry film thickness of 2.5-mils.

END OF SECTION

SECTION 06 10 53 MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for miscellaneous rough carpentry items, including but not limited to the following:
1. Wood blocking and backing.
 2. Plywood sheathing where indicated.

1.2 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Keep materials under cover and dry. Protect against exposure to weather and contact with wet or damp surfaces.
- C. Stack lumber, plywood and other panels; provide for air circulation within and around stacks and under temporary coverings.

PART 2 - PRODUCTS

2.1 LUMBER

- A. Manufacture lumber to comply with PS 20 and with applicable grading rules of inspection agencies certified by ALSC Board of Review.
- B. Factory-mark each piece of lumber identifying grading agency, grade, species, moisture content at time of surfacing, and mill.
- C. Nominal sizes are indicated, except as indicated by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use. Provide dressed lumber, S4S, unless otherwise indicated.
- D. Moisture Content: 19 percent maximum.
- E. Species and Grade: Douglas Fir, No. 2 unless otherwise indicated.

2.2 PLYWOOD SHEATHING

- A. Standards: Comply with requirements of APA PRP-108 "Performance Standards and Policies for Structural-Use Panels".
- B. Miscellaneous Plywood Sheathing: APA RATED SHEATHING.
1. Exposure Durability Classification: Exposure 1.
 2. Span Rating: As required to span framing members.
 3. Thickness: As indicated or required to match existing.

2.3 FASTENERS

- A. General: Provide fasteners with hot-dip zinc coating in accordance with ASTM A153 or stainless steel.
- B. Nails, Wire, Brads, Staples: FS FF-N-105.
- C. Bolts: ASTM A307, Grade A; with hex nuts and flat washers.
- D. Screws: Type, size and length appropriate for securing gypsum and plywood sheathing to metal studs.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects which might impair quality of work, and units in sizes that would require an excessive number or poor arrangement of joints.
- B. Cut and fit miscellaneous carpentry accurately. Install members plumb and true to line and level.
- C. Securely attach carpentry work to substrate by anchoring and fastening as indicated and required.
- D. Use fasteners of appropriate type and length and compliant with CBC Chapter 23. Install fasteners without splitting wood; pre-drill as required.

3.2 WOOD GROUNDS, NAILERS, AND BLOCKING

- A. Provide where indicated and required for screeding or attachment of other work. Form to shapes indicated and cut as required for true line and level of work to be attached. Coordinate location with other work involved.
- B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces.
- C. Provide permanent grounds of dressed, preservative treated, key- beveled lumber not less than 1-1/2-inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.3 PLYWOOD SHEATHING

- A. Saw cut plywood accurately for a tight fit.
- B. Install with grain of outer plies at right angles to supports.
- C. Fasten securely at each support with self-tapping sheet metal screws driven flush with face of plywood and terminate ends only over supports.
- D. Maintain tight joints but do not force panels into place.

END OF SECTION

SECTION 06 20 13 EXTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing exterior finish carpentry items including the following:
 - 1. Wood cap and handrail at exterior metal guardrails.
- B. Related Sections:
 - 1. Metal fabrications are specified in Section 05 50 00.
 - 2. Miscellaneous rough carpentry is specified in Section 06 10 53.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Samples: 12-inch-long sample of Ipe wood cap and handrail.
- C. Information Submittals:
 - 1. Certification: Certification from IPE supplier that IPE decking boards were harvested under the guidelines and techniques of sustainable yield forestry management as set forth by the International Tropical Timber Organization (ITTO).

1.3 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Protect finish carpentry during transit, delivery, storage, and handling to prevent damage, soilage, and deterioration.
- C. Store IPE wood out of direct sunlight, directly off solid surfaces at least 4-inches. Allow to acclimate to the installation environment for a minimum of 3-weeks unless shorter periods are approved by the supplier for the installation environment.

PART 2 - PRODUCTS

2.1 INSTALLATION MATERIALS

- A. Screws: Type 316 stainless steel; type and size required.
- B. Anchors: Type 316 stainless steel; type and size required for each substrate for secure anchorage.

2.2 FABRICATION GENERAL

- A. Wood Moisture Content: Comply with requirements of referenced quality standard for moisture content of lumber in relation to relative humidity conditions existing during time of fabrication and in installation areas.
- B. Fabricate carpentry items to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Edges of solid wood (lumber) members less than 1-inch in nominal thickness: 1/16-inch.
 - 2. Edges of rails and similar members 1-inch or more in nominal thickness: 1/8-inch.

2.3 IPE WOOD CAP RAILS AND HANDRAILS

- A. Wood Boards: IPE heartwood, air-dried to a maximum moisture content of 20-percent. Nominal sizes as indicated.
- B. End Sealer: Paraffin wax-based sealer or as recommended by wood supplier for sealing field end cuts.
- C. Sand surfaces smooth and free from splinters and sharp edges or corners.
- D. Applied Wood Finish: As directed by the Architect.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Condition finish carpentry to average prevailing humidity conditions in installation areas before installation.

3.2 INSTALLATION

- A. Install finish carpentry plumb, level, true, and straight with no distortions. Shim as required with concealed shims. Install to a tolerance of 1/8 inch in 8'-0" for plumb and level and with no variations in flushness of adjoining surfaces.
- B. Scribe and cut to fit adjoining work.
- C. IPE Wood Cap Rails and Handrails:
 - 1. Cut boards with premium carbide tipped blades. Pre-drill fastener holes.
 - 2. Wax end cuts immediately after cutting to reduce end checking. Avoid waxing the board surface.

3.3 ADJUSTMENT AND CLEANING

- A. Repair damaged and defective work where possible to eliminate defects functionally and visually; where not possible to repair, replace. Adjust joinery for uniform appearance.
- B. Clean exposed surfaces.

END OF SECTION

SECTION 07 14 16
FLUID APPLIED WATERPROOFING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section includes:
 - 1. Cold fluid applied waterproofing membrane with all applicable accessory products
 - 2. Prefabricated drainage composite

- B. Related Sections:
 - 1. Rigid insulation is specified in Section 07 21 13.
 - 2. Sheet metal flashing and trim is specified in Section 07 62 00.
 - 3. Joint sealants are specified in Section 07 92 00.

1.2 SYSTEM DESCRIPTION

- A. Provide waterproofing and drainage composite system to prevent the passage of liquid water under hydrostatic pressure and install without defects, damage or failure. Waterproofing shall be cold fluid applied tar free urethane membrane system of not less than 1.5mm (60-mil) dry film thickness.

1.3 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.

- B. Action Submittals:
 - 1. Product Data: Submit manufacturer's product data, with complete general and specific installation instructions, recommendations, and limitations.

- C. Information Submittals:
 - 1. Certificates: Submit certificate(s) signed by manufacturer certifying materials comply with specified performance characteristics and physical requirements. Submit certification that waterproofing and drainage materials are supplied by a single-source manufacturer to assure material compatibility.

- D. Closeout Submittals:
 - 1. Warranty.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Installing company should have at least 3 years' experience in work of the type required by this section, who can comply with manufacturer's warranty requirements, and who is an approved applicator as determined by waterproofing/drainage system manufacturer.

- B. Manufacturer Qualifications: Fluid applied waterproofing system shall be provided by a firm with a minimum of 30 years experience in the production and sales of waterproofing systems. Manufacturer shall be capable of providing field service representation during construction, approving an acceptable installer, recommending appropriate installation methods, and conducting a final inspection of the waterproofing and drainage system applied.

- C. Pre-Installation Conference: A pre-installation conference shall be held prior to commencement of field installation to establish procedures to maintain required working conditions and to coordinate this work with related and adjacent work. Meeting should include Architect, Contractor, installer, and manufacturers' representative.

- D. Materials: Obtain waterproofing and drainage materials from a single manufacturer to assure material compatibility.
- E. Inspection: Manufacturer’s representative shall inspect waterproofing installation periodically during application to verify that waterproofing has been installed in accordance with manufacturer’s guidelines and recommendations.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Delivery and Handling: Deliver materials in factory sealed and labeled packaging. Sequence deliveries to avoid delays, while minimizing on-site storage. Handle and store following manufacturer's instructions, recommendations and material safety data sheets. Protect from construction operation related damage, and damage from weather, excessive temperatures and prolonged sunlight. Remove damaged material from site and dispose of in accordance with applicable regulations.
- B. Storage: Do not double-stack pallets during shipping or storage. Protect from moisture, excessive temperatures and sources of ignition. Provide cover, top and all sides, for materials stored on-site, allowing for adequate ventilation.

1.6 PROJECT CONDITIONS

- A. Substrate Condition: Proceed with work only when substrate construction and preparation work is complete and in condition to receive waterproofing.
- B. Weather Conditions: Perform work only when existing and forecasted weather conditions are within the guidelines established by the manufacturer of the waterproofing materials. Do not proceed with waterproofing installation when ambient or substrate temperature is below 40°F. Do not apply waterproofing materials to a damp, or contaminated surface.

1.7 WARRANTY

- A. Waterproofing Warranty: Upon completion and acceptance of the work required by this section, the waterproofing materials manufacturer will provide a written 5 year material warranty. Manufacturer's warranty shall be independent from any other warranties made by the Contractor under requirements of the Contract Documents and may run concurrent with said warranties.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. CETCO LDC 60 or approved equal.

2.2 MATERIALS

- A. Waterproofing Membrane Grades: Provide LDC 60V for vertical applications and LDC 60H for horizontal applications. If the horizontal surface has a slope greater than 5%, use LDC 60V. Both LDC 60V and LDC 60H have the following properties:

PHYSICAL PROPERTIES OF LDC 60 (Cured 60-Mil Thick Membrane):

Property	Test Method	LDC 60H Typical Value	LDC 60V Typical Value
Tensile Strength	ASTM D412	250 psi	300 psi
Elongation	ASTM D412	650%	650%

Adhesion to Concrete	ASTM C794	20 pli	20 pli
Shore A Hardness	ASTM D2240	20	25
Shore "00" Hardness	ASTM C836	58-64	62-64
Water Vapor Permeance	ASTM E96 (B)	0.09 perms	0.09 perms
Tear Resistance	ASTM D624	55 pli	80pli
Water Absorption	ASTM D471	0.4%	0.7%
Crack Cycling at -25F	ASTM C836	Unaffected	Unaffected

- B. Accessory Materials: Trowel-grade mastic and other specified accessory materials shall be provided by membrane manufacturer:
1. M-2000 Liquid Flashing trowel-grade mastic
- C. Prefabricated Drainage Composite: JDR Enterprises, Inc. J-Drain 400 Series or approved equal consisting of an impermeable polypropylene sheet cusped under heat and pressure to form a high flow dimpled drainage core with a bonded layer of nonwoven filter fabric.
1. Compressive Strength, ASTM D1621: 15,000-psi.
 2. Thickness, ASTM D1777: .40 inch.
 3. Flow, ASTM D4716: 21 g/min/f.

PART 3 - EXECUTION

3.1 GENERAL

- A. Comply with manufacturer's product data, including product application and installation instructions.

3.2 INSPECTION

- A. Examine conditions of substrates and other conditions under which this section work is to be performed and notify the Architect in writing of circumstances detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected and are acceptable for compliance with manufacturer's warranty requirements.

3.3 SURFACE PREPARATION

- A. Protect adjacent work areas and finish surfaces from damage or contamination from waterproofing products during installation operations.
- B. Concrete Substrates:
1. Concrete to receive waterproofing shall be of sound structural grade with a smooth finish, free of debris, oil, grease, laitance, dirt, release agent, curing compounds (except pure sodium silicate type), or other foreign matter which will impair the adhesion of the waterproofing. Structural concrete shall be cured a minimum of 14 days prior to membrane installation. Lightweight structural concrete requires a minimum of 21 days cure time prior to membrane installation.
 2. Remove fins, ridges, and other protrusions leveled and smoothly finished to match monolithic concrete surface. Completely fill honeycomb, aggregate pockets, holes and other voids with non-shrink cementitious grout leveled and smoothly finished to match monolithic concrete surface.
- C. Wood Substrates: Apply waterproofing over securely fastened sound surface. All screw heads shall be flush to create a smooth surface. Fill joints with urethane caulk before applying waterproofing membrane. Install flashing as recommended by waterproofing manufacturer.
- D. Exposed metal surfaces (pipes, sleeves, drains, vents, etc.) shall be clean. Remove oil, paint, rust, scales, or any other foreign matter before applying waterproofing.

3.4 DETAILING GUIDELINES

- A. Detailing shall be completed prior to installation of membrane waterproofing course.
 - 1. All non-moving cracks and joints over 1/8 inch wide shall receive minimum 30-mil thick strip coat of LDC-60 or M-2000 Liquid Flashing prior to installation of main LDC-60 membrane course. Strip coat shall completely fill crack and extend minimum 2 inches from crack or joint.
 - 2. Inside Corner Transitions: Install a 3/4 inch fillet of M-2000 Liquid Flashing at all horizontal and vertical inside corners. Install M-2000 90-mil thick extending out from corner cant minimum 6 inches on both sides.
 - 3. Penetrations: Seal around penetrations with minimum 90-Mil thick coat of M-2000 Liquid Flashing extending onto penetration and extending out a minimum 6 inches radius around the penetration.
 - 4. Footing-to-Wall Transition: Install a 3/4 inch fillet of M-2000 Liquid Flashing at the horizontal to vertical inside corner. Install M-2000 90-mil thick extending out from corner cant minimum 6 inches on both sides.

3.5 FLUID MEMBRANE INSTALLATION

- A. Allow urethane sealant used in all preparation of surfaces, cracks or joints, and other detailing, including flashing to cure before installation of membrane. Allow M-2000 mastic to cure a minimum 12 hours before applying membrane.
- B. Vertical Surfaces:
 - 1. Apply LDC 60V waterproofing membrane by roller, squeegee, or airless spray at a rate of 25 square feet per gallon, or as required, to achieve a uniform dry film thickness of 60-mils. Check or gauge wet mil thickness as the work progresses. Membrane can be installed in two passes to achieve the 60-mil dry thickness. Allow first coat to sufficiently cure, typically 4 to 6 hours, before applying second coat.
 - a. At membrane termination for overnight work stoppage, wipe off previously applied material with xylene solvent a minimum 6 inches at edge to remove dirt and dust. Overlap cured membrane a minimum 6 inches with new work. Do not allow stoppage period to exceed 72 hours at membrane overlap areas.

3.6 PREFABRICATED DRAINAGE COMPOSITE INSTALLATION

- A. Vertical Surfaces: Starting at the base of the wall, install prefabricated drainage composite over the waterproofing membrane in accordance with manufacturers instructions. Use construction adhesive or other manufacturer approved non-penetrating method to secure the prefabricated drainage composite to the waterproofing membrane.

3.7 RIGID INSULATION

- A. As specified in Section 07 21 13.

3.8 BACKFILL

- A. Closely coordinate membrane installation with backfill. Care should be used during backfill operation to avoid damage to the waterproofing system and drainage composite. Follow generally accepted practices for backfilling and compaction. Backfill should be added in 6 to 12 inch lifts and compacted.

3.9 CLEAN UP

- A. Cured material will require mechanical means, such as scraping or sand blasting. Wet material can be removed with xylene solvent. Do not clean skin with solvent. Remove all tools, equipment and remaining products on-site. Dispose of section work debris and damaged product following all applicable regulations.

END OF SECTION

SECTION 07 21 13 RIGID INSULATION

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing rigid board insulation.
- B. Related Sections:
 - 1. Fluid-applied waterproofing is specified in Section 07 14 16.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Manufacturer's specifications for each type of insulation required.
 - a. Include documentation verifying that thermal insulation materials meet the pollutant emission limits specified in CalGreen Section 5.504.4.7.

1.3 QUALITY ASSURANCE

- A. Insulation shall comply with CalGreen Section 5.504.4.7.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Protect insulation from physical damage and from becoming wet or soiled. Comply with manufacturer's recommendations for handling, storage, and protection during installation.

1.5 TESTING AND INSPECTIONS

- A. Inspect insulation for proper installation. Correct defects such as voids or gaps before accepting work.

PART 2 - PRODUCTS

2.1 RIGID INSULATION

- A. Extruded Polystyrene (XPS) Board Insulation: Extruded polystyrene board insulation complying with ASTM C578, Type IV.
 - 1. Approved Manufacturer: Dow "Styrofoam Brand", Owens Corning "Foamular 250" or approved equal.
 - 2. Compressive Strength, ASTM D1621: 25-psi.
 - 3. Flexural Strength, ASTM C203: 50-psi.
 - 4. Water Absorption, ASTM C272: 0.3-percent by volume.
 - 5. Water Vapor Permeance, ASTM E96: 1.5-perms.
 - 6. Dimensional Stability, ASTM D2126: 2.0-percent linear change.
 - 7. Thickness: As indicated.
 - 8. Surface Burning Characteristics: Maximum flame-spread and smoke development values of 10 and 175 when tested in accordance with ASTM E84.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General:
 - 1. Comply with manufacturer's instructions for installation conditions.
 - 2. Carefully cut and fit insulation around pipes, conduit, and other obstructions and penetrations.

- B. Rigid Insulation: Install at below grade walls where indicated in accordance with manufacturer's instructions.

3.2 PROTECTION

- A. Protect installed insulation from harmful exposures and from physical damage.

END OF SECTION

SECTION 07 25 00 WEATHER BARRIER

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing the following:
 - 1. Weather barrier as required at exterior patched plaster walls.
- B. Related Sections:
 - 1. Aluminum-clad wood windows are specified in Section 08 52 13.
 - 2. Exterior plaster patching is specified in Section 09 24 13.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Manufacturer's product data and installation instructions.
- C. Closeout Submittals:
 - 1. Warranty.

1.3 QUALITY ASSURANCE

- A. Comply with California Building Code (CBC) Section 1404.2.
- B. Installer: Certified or approved by the weather barrier manufacturer to install the specified products with a minimum of 5-years' continuous experience installing the specified materials.
- C. Mock-up: Construct an on-site mock-up showing installation of weather barrier and opening flashing at a typical window and door opening. Mock-up shall incorporate materials to be used and installation techniques to be employed. Include adjacent siding, head flashing, and other materials. Do not begin installation of weather barrier and opening flashing until mock-up is approved by the Architect. Approved mock-up shall serve as an installation quality standard for the Project. Coordinate with the work of Sections 08 52 13 and 09 24 13.
- D. Pre-installation Conference: Conduct a pre-installation conference to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work. Pre-installation conference shall include Contractor, installer, Architect, and weather barrier system manufacturer's field representative. Agenda shall include the following:
 - 1. Review required submittals.
 - 2. Review surface preparation, minimum during period and installation procedures.
 - 3. Review special details and flashings.
 - 4. Sequence of construction, responsibilities and schedule for subsequent operations.
 - 5. Mock-up requirements.
 - 6. Inspection, testing, protection and repair procedures.

1.4 JOB CONDITIONS

- A. Surfaces to receive weather barrier shall be free from projecting nails, wires, or other conditions that might damage paper.
- B. Surfaces to be covered by weather barrier shall be dry and shall have dried in fair weather not less than 3-days following wetting by rain.

1.5 WARRANTY

- A. Warrant weather barrier to be free from defects in materials and workmanship for a period of 10-years from Date of Substantial Completion. This warranty shall be in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Weather Barrier at Cement Plaster:
1. Weather Barrier:
 - a. Approved Manufacturer: Henry “Two-Ply HydroTex Drainable Weather-Resistive Barrier” ICC ESR-1027 or approved equal.
 - b. Material: Asphalt saturated kraft Grade D breather type sheathing paper and spunbonded polypropylene breathable fabric coated with a non-perforated breathable barrier layer.
 - c. Water Vapor Transmission: 49.8 grams; 7.6-perms (MVT), ASTM E96.
 - d. Drainage Efficiency: >90-percent, Pass, ASTM E2273.
 - e. Water Resistance: >120 minutes, ASTM D779.
 - f. Tensile Strength: 80-lb./inch MD; 30-lb./inch CD, ASTM D828.
 2. Fasteners: As recommended by weather barrier manufacturer.
 3. Opening Flashing:
 - a. Approved Manufacturer: Henry “FortiFlash Butyl” or approved equal.
 - b. Flashing: Self-adhesive waterproof membrane composed of a coated woven facer, all-butyl adhesive and a paper release liner.
 - 1) Thickness: 20-mil minimum.
 - 2) Roll Width: As appropriate for openings to be flashed.
 - 3) Physical Properties:
 - a) Tensile Strength, AAMA 711 Sec 5.1: MD – 70 lbf/in; CD – 70 lbf/in.
 - b) Nail Stability, AAMA 711 Sec 5.2: Pass.
 - c) 90-deg. Peel Adhesion, AAMA 711 Sec. 5.3:
 - (1) Plywood: 5.9-lbf/in.
 - (2) OSB: 2.0-lbf/in.
 - (3) Facer: 6.0-lbf/in.
 - d) Water Resistance, ASTM D779: >200 hours.
 - c. Primer: As recommended by membrane manufacturer for priming substrates to receive self-adhering sheet flashing.
 - d. Joint Sealant: Henry “Moistop Sealant” or approved equal certified by self-adhering flashing manufacturer as being compatible with flashing.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Ensure items which pass through the weather barrier are properly and rigidly installed, substrate is free of projections and irregularities which may be detrimental to proper installation.
- B. Surfaces shall be sound, dry, clean, and free of contaminants.
- C. Protect adjacent surfaces not included in the scope of work.

3.2 INSTALLATION

- A. Weather Barrier at Cement Plaster Walls:
1. Reinforce interior and exterior corners with self-adhering sheet flashing prior to installation of weather barrier.
 2. Install weather barrier before installation of window and door flashing as detailed in AAMA Method A in Report 2400 and ASTM E2112.
 - a. Utilize weather barrier in longest lengths practical to minimize joints.
 - b. Horizontal Joints: Lap not less than 4-inches.
 - c. Wall Corners: Wrap to overlap not less than 12-inches each side of corner.
 - d. Intermediate Vertical Joints:
 - 1) Lap not less than 6-inches.

- 2) In adjacent sheets, offset joints not less than 48-inches.
 - 3) In alternate sheets, offset joints not less than 24-inches.
 - 4) Do not locate any two joints at same vertical alignment.
- e. Lap weather barrier over head flashings and base screeds and under sill flashings. Treat penetrations and other details as necessary for adequate weather protection.
 - f. Secure weather barrier to maintain in place until covered by other materials.
 - g. When complete, the weather barrier shall be reasonably flat, without excessive warps and bulges, and free from holes, cuts, tears, and other damage and defects.
 - h. Seal edges and penetrating items in accordance with manufacturer's instructions.
4. Self-Adhering Flashing at Openings and Penetrations:
- a. Coordinate installation of self-adhering opening flashing with installation of weather barrier. Opening flashing shall be installed after installation of the weather barrier in accordance with CBC Section 2510.6. Comply with Method A in AAMA Report 2400 and with ASTM E2112.
 - b. Install the membrane flashing following the shingle principle. Apply the top membrane layer over the bottom layer so that the system sheds water.
 - c. Cut the membrane to proper length.
 - d. Peel back the release liner, align the strip, and press in place with heavy hand pressure. Lap ends 3-inches. Roll sheets with a hand roller, including lapped seams.
 - e. Install so all laps shed water. Work from the low point to the high point.
 - f. Wrap flashings at sill, jambs and head of all openings. Turn up ends at least 2-inches and make careful folds to form end dams, with seams sealed.
 - g. Carefully notch and fold flashing corners and returns.
 - h. Installed membrane shall be covered with subsequently applied covering material.

3.3 CLEANING

- A. Clean up and remove from the premises all rubbish and surplus materials resulting from the work of this Section.
- B. Clean soiled surfaces and damage caused by the work of this Section.

END OF SECTION

SECTION 07 62 00 SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing flashing and sheet metal including modifications to existing where required.
- B. Related Sections:
 - 1. Self-adhering sheet flashing is specified in Section 07 65 26.
 - 2. Joint sealants are specified in Section 07 92 00.
 - 3. Painting is specified in Section 09 91 00.

1.2 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects. Completed sheet metal flashing and trim shall not rattle, leak, or loosen and shall remain watertight.
- B. Dissimilar Metal Corrosion Protection: Permanently isolate metal surfaces from direct contact with incompatible materials and other potentially corrosive substrates.
- C. Thermal Movements: Provide sheet metal flashing and trim that allows for thermal movements from ambient and surface temperature changes of 120-deg. F. ambient and 180-deg. F. material surfaces.

1.3 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Manufacturer's product data, installation instructions and general recommendations for each specified sheet material and fabricated product. Include construction details, material descriptions, dimension of components and profiles, and finishes for each manufactured product or accessory.
 - 2. Samples: 8-inch square samples of specified sheet materials to be exposed as finished surfaces.
 - 3. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing and trim, including plans, elevations, and details with detail callouts. Distinguish between shop- and field-assembled work. Include the following:
 - a. Identification of material, thickness, weight, and finish for each item and location.
 - b. Project-specific details of forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
 - c. Project-specific details for joining, supporting, and securing sheet metal flashing and trim, including layout of fasteners, cleats, clips and other attachments. Include pattern of seams.
 - d. Project-specific details of termination points and assemblies, including fixed points.
 - e. Project-specific details of edge conditions, including eaves, ridges, valleys, rakes, crickets, and counterflashings as applicable.
 - f. Details of special conditions.
 - g. Details of connections to adjoining work.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop with a minimum of 10 years' experience fabricating sheet metal that employs skilled workers who custom fabricate sheet metal flashing and trim like that required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Minimum 5 years' experience installing sheet metal flashing and trim similar to the scope of this Project.

- C. Sheet Metal Flashing and Trim Standard: Comply with SMACNA “Architectural Sheet Metal Manual” unless more stringent requirements are indicated or specified.
- D. Pre-installation Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, Owner’s insurer, installer, and installer whose work interfaces with or affects sheet metal flashing and trim including installers of roofing materials, roof accessories, skylights, and roof-mounted equipment.
 - 2. Review methods and procedures related to sheet metal flashing and trim.
 - 3. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
 - 4. Review details and condition of other construction that will affect sheet metal flashing and trim.
 - 5. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.5 DELIVERY, STORAGE AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- C. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent required for the period of sheet metal flashing and trim installation.

PART 2 - PRODUCTS

2.1 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
- B. Sheet Metal Thickness: The following table may be used to covert specified sheet metal thickness to gauges. Not all materials will be used in the Project.

Gauge No.	Aluminum	Stainless steel	Zinc-Tin Coated Stainless Steel	Galvanized	Aluminum-Zinc Coated Steel	Zinc
12	---	---	---	---	---	.028"
13	---	---	---	---	---	.032"
14	---	---	---	---	---	.036"
15	---	---	---	---	---	.040"
16	.063"	.063"	---	.064"	.064"	.045"
18	.050"	.050"	---	.052"	.052"	.055"
20	.040"	.038"	---	.040"	.040"	.070"
22	.034"	.031"	---	.034"	.034"	.090"
23	.032"	.028"	---	.031"	.031"	.100"
24	.028"	.025"	---	.028"	.028"	.125"
25	.024"	.022"	.024"	.025"	.025"	---
26	.022"	.019"	.018"	.022"	.022"	---
28	---	.016"	.015"	.019"	.019"	---

- C. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and pre-painted by the coil-coating process to comply with ASTM A755.
 - 1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A653, G90 coating designation; structural quality.
 - 2. Surface: Smooth, flat and mill phosphatized for field painting as specified in Section 09 91 00.
- D. Stainless Steel Sheet: ASTM A240 or ASTM A666, Type 304, dead soft, fully annealed, 2D finish, smooth flat surface. Provide where flashings are in contact with the ground and where stainless steel flashings are indicated.

2.2 UNDERLAYMENT MATERIALS

- A. Self-Adhering Sheet Flashing: As specified in Section 07 65 26. Include primers as recommended by sheet flashing manufacturer.

2.3 MISCELLANEOUS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts and other suitable fasteners designed to withstand design loads and recommended by the manufacturer.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
 - b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
 - 2. Fasteners for Zinc-Coated (Galvanized) and Aluminum-Zinc Alloy-Coated Steel Sheet: Hot-dip galvanized steel according to ASTM A153 or ASTM F2329 or Series 300 stainless steel.
 - 3. Fasteners for Stainless Steel Sheet: Series 300 stainless steel.
- C. Solder:
 - 1. For Zinc-Coated (Galvanized) Steel: ASTM B32, Grade Sn50, 50-percent tin and 50-percent lead or Grade Sn60, 60-percent tin and 40-percent lead.
 - 2. For Stainless Steel: ASTM B32, Grade Sn60, with an acid flux of type recommended by stainless steel sheet manufacturer.
- D. Sealant Tape: Pressure-sensitive, 100-percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanent elastic, non-sag, non-toxic, non-staining tape 1/2-inch wide and 1/8-inch thick.
- E. Elastomeric Sealant: ASTM C920, elastomeric polyurethane, polysulfide or silicone polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- F. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- G. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187.
- H. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

2.4 MANUFACTURED SHEET METAL FLASHING AND TRIM

- A. Reglets: Cheney Flashing Company, Fry Reglet Corporation, Hohmann & Barnard, Inc., Keystone Flashing Company, Inc. or approved equal. Form to provide secure interlocking of separate reglet and counterflashing pieces, compatible with flashing material. Provide factory-mitered and -welded corners and junctions and interlocking counterflashing on exterior face of same metal as reglet.
 - 1. Material: 0.025-inch stainless steel.
 - 2. Surface-Mounted Type: Provide with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers and with channel for sealant at top edge.
 - 3. Masonry Type: Provide with offset top flange for embedment in masonry mortar joint.
 - 4. Provide counterflashing wind-resistant clips to be installed before counterflashing to prevent wind uplift of counterflashing lower edge.

2.5 FABRICATION, GENERAL

- A. General: Custom-fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness and other characteristics. Fabricate items at the shop to the greatest extent possible. Where shop fabrication is not possible, ensure the same quality from in-field fabrication.

1. Fabricate sheet metal flashing and trim in thickness or weight required to comply with performance requirements, but not less than that specified for each application and metal.
 2. Obtain field measurements for accurate fit before shop fabrication.
 3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels, with exposed edges folded back to form hems.
 4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
 5. Weld corner transitions watertight.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4-inch in 20-feet on slope and location lines and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant.
- D. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1-inch deep, filled with butyl sealant concealed within joints.
- E. Fabricate cleats and attachment devices from the same material as accessory being anchored or form compatible, non-corrosive metal. Fabricate of sizes as recommended by SMACNA’s “Architectural Sheet Metal Manual” and FMG Loss Prevention Data Sheet 1-49 for application, but not less than thickness of metal being secured.
- F. Seams: Fabricate non-moving seams with flat-lock seams. Form seams and seal with elastomeric sealant. Rivet joints where required for strength.

2.6 WALL SHEET METAL FABRICATIONS

- A. Opening Flashings: Fabricate head, sill, jamb and similar flashings to extend 4-inches beyond wall openings. Form head and sill flashing with 4-inch-high end dams unless otherwise indicated. Fabricate from the following material:

Material	Thickness
Galvanized Steel	0.022"

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions with installer present, to verify actual locations, dimensions and other conditions affecting performance of the work.
1. Verify compliance with requirements for installation tolerances of substrates.
 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- B. For the record, prepare a written report, endorsed by installer, listing conditions detrimental to performance of the work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Flashing Underlayment: Install as specified in Section 07 65 26.

3.3 INSTALLATION

- A. General: Anchor sheet metal flashing and trim and other components securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants and other miscellaneous items as required to complete sheet metal flashing and trim.
1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.

2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 3. Space cleats not more than 12-inches apart. Anchor each cleat with two fasteners, Bend tabs over fasteners.
 4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
 5. Install sealant tape where indicated and required for a watertight installation.
 6. Torch cutting of sheet metal flashing and trim is not permitted.
 7. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.
1. Coat the back side of uncoated stainless steel sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24-inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1-inch deep, filled with sealant concealed within joints.
- D. Seal joints as required for watertight construction.
1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1-inch into sealant. Form joints to completely conceal sealant. When the ambient temperature at the time of installation is moderate, between 40- and 70-deg. F., set joint members for 50-percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant type joints at temperatures below 40-deg. F.
 2. Prepare joints and apply sealants to comply with requirements specified in Section 07 92 00.
- E. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2-inches, except reduce pre-tinning where pre-tinned surface would show in completed work.
1. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Remove flux and spatter from exposed surfaces.

3.4 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations. Coordinate installation of wall flashing with installation of wall opening components including windows and doors.

3.5 INSTALLATION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4-inch in 20-feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, remove unused materials and clean finished surfaces. Maintain a clean condition during construction.

- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

SECTION 07 65 26 SELF-ADHERING SHEET FLASHING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing self-adhering sheet flashing material under metal flashings and where indicated.
- B. Related Sections:
 - 1. Sheet metal flashing and trim is specified in Section 07 62 00.
 - 2. Joint sealants are specified in Section 07 92 00.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Furnish manufacturer's standard product data sheets and installation recommendations and instructions. Include written instructions for evaluating, preparing, and treating substrates as well as technical data including tested physical and performance properties.
- C. Information Submittals:
 - 1. Installer qualifications.

1.3 QUALITY ASSURANCE

- A. Installer: Certified or approved by the self-adhering sheet flashing manufacturer to install the specified products with a minimum of 5 years' continuous experience installing the specified materials.

1.4 JOB CONDITIONS

- A. Apply self-adhering sheet flashings in fair weather at temperatures of 40 degrees F. and above.
- B. Provide adequate ventilation of enclosed spaces where primer is used.

1.5 DELIVERY, STORAGE AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Store materials in their original, sealed packages, labeled with manufacturer's name, product brand name and type, date of manufacture, lot number, and directions for storing.
- C. Store materials in a clean, dry and protected location and within the temperature range required by the manufacturer. Protect stored materials from direct sunlight.
- D. Remove and replace materials that cannot be applied within stated shelf life.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. GCP Applied Technologies “Ultra”, Henry / Fortifiber “FortiFlash Butyl” or approved equal.

2.2 MATERIALS

- A. Self-Adhering High-Temperature Sheet Flashing: Underlayment composed of two waterproofing materials – 100-percent butyl rubber adhesive backed by a layer of high density cross laminated polyethylene film.
 - 1. Thickness: 30-mil.
 - 2. Tensile Strength, ASTM D412 (Die C Modified): 250-psi.
 - 3. Elongation, ASTM D412 (Die C Modified): 250-percent.
 - 4. Low Temperature Flexibility, ASTM D1970: Unaffected @ -20-deg. F.
 - 5. Adhesion to Plywood, ASTM D903: 3.0-lbs./in. width.
 - 6. Permeance, ASTM E96: 0.005 perms.
 - 7. Adhesive: 100-percent butyl, contains no asphalt.
- B. Primer: As recommended by membrane manufacturer for priming substrates to receive self-adhering sheet flashing.
- C. Joint Sealant: Certified by self-adhering flashing manufacturer as being compatible with flashing.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions under which self-adhering sheet flashing will be applied with installer and manufacturer’s representative present for compliance with requirements and for other conditions affecting performance of the self-adhering sheet flashing system. Do not proceed with installation until unsatisfactory conditions have been corrected and reviewed by the Architect.
- B. Installation of self-adhering sheet flashing constitutes acceptance of substrate conditions.

3.2 PREPARATION

- A. Remove dust, dirt, loose fasteners, and other protrusions. Clean, prepare and treat substrates according to manufacturer’s written instructions. Provide clean, sound, and dry substrate.
- B. Prime substrates to receive self-adhering sheet flashing if required by manufacturer. Allow primer to dry for one hour or until tack-free. Re-prime surfaces not covered within 36 hours.

3.3 INSTALLATION

- A. Self-Adhering Sheet Flashing:
 - 1. Install self-adhering sheet flashing in accordance with manufacturer’s written instructions. Ensure that flashing adheres continuously with the substrate and is free of wrinkles, fish mouths, bubbles, creases, and other irregularities.
 - 2. Comply with temperature restrictions of underlayment manufacturer for installation. Use primer rather than nails for installing at low temperatures.
 - 3. Apply in shingle fashion to shed water, with end laps of not less than 6-inches staggered 24-inches between courses.
 - 4. Overlap side edges not less than 3-1/2-inches.
 - 5. Carefully notch and fold flashing corners and returns.
 - 6. Roll installed flashing with roller.

7. Installed membrane shall be covered as soon as possible with subsequently applied covering material. Do not leave membrane exposed to the weather for longer periods than approved by the manufacturer.

3.4 COMPLETION

- A. Remove and replace self-adhering sheet flashing that does not comply with specified requirements. Holes in the flashing shall be patched with a minimum 6-inch overlap or in accordance with the self-adhering sheet flashing manufacturer's instructions.

END OF SECTION

SECTION 07 92 00 JOINT SEALANTS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing joint sealants.
- B. Related Sections:
 - 1. Joint sealants related to flashing and sheet metal work are specified in Section 07 62 00.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Manufacturer's technical data for each product required, including instructions for joint preparation and sealant application. Include certification by joint sealant manufacturer that sealants, primers, and cleaners comply with local regulations controlling the use of volatile organic compounds (VOC).
 - 2. Samples: Manufacturer's bead samples of actual products showing full range of colors available, for each product exposed to view.
- C. Information Submittals:
 - 1. Test Reports:
 - a. Certified test results of elastomeric sealants showing compliance with specified requirements. Include results of aged performances including hardness, stain-resistance, adhesion and cohesion under cyclic movement, low temperature flexibility, modulus of elasticity at 100-percent strain, affects of heat and aging, and affects of accelerated weathering.
 - b. Pre-construction field test results indicating which products and joint preparation methods demonstrated acceptable adhesion to joint substrates.
 - 2. Certificates: Manufacturer's certification that joint sealants comply with specified requirements and are suitable for uses indicated.
- D. Closeout Submittals:
 - 1. Warranty.

1.3 QUALITY ASSURANCE

- A. Installer's Qualifications: Completion of at least 3 installations similar in type and size to this Project.
- B. Obtain joint sealant materials from a single manufacturer for each product required unless otherwise approved.
- C. Sealant materials shall be compatible with one another and with other specified and existing materials, under conditions of service and application required.
- D. Preconstruction Field Testing: Prior to installation of exterior joint sealants, field-test adhesion to joint substrates.
 - 1. Install joint sealants in 5-foot joint lengths. Allow to cure before testing. Test adhesion by pulling sealant out of joint according to "Method A, Field-Applied Sealant Joint Hand Pull Tab", in Appendix X1 in ASTM C1193. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 - 2. Perform field tests for each type of elastomeric sealant and joint substrate.
 - 3. Arrange for tests to take place with joint sealant manufacturer's technical representative present.
 - 4. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate.

5. Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrate during testing.

E. Sealants shall comply with CalGreen Section 5.504.4.1 – Adhesives, Sealants and Caulks.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Deliver materials in the unopened, original containers or unopened packages with manufacturer's name, labels, product identification, color, expiration period, curing time and mixing instructions for multi-component materials.
- C. Store materials in the original, unopened containers or packages, and under conditions recommended by manufacturers.

1.5 PROJECT CONDITIONS

- A. Environmental Conditions: Do not install sealants when ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer, or to wet joint substrates.
- B. Joint Width Conditions: Do not install sealants when joint widths are less than permitted by sealant manufacturer.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.6 WARRANTY

- A. Manufacturer Warranty: Furnish manufacturer's written warranty that sealants will be free from defects for a period of 20-years from date of Substantial Completion.
- B. Exterior Sealants: Furnish a written warranty against leaks or other defects of materials and workmanship for a period of 10 years. Defects include but are not limited to changes in the structural, physical or chemical properties of the sealant materials that impair function or require abnormal maintenance, changes in surface finish, color or texture, failure in adhesion, weather resistance or durability, failure to prevent entry of water, or failure to comply with specified requirements.
- C. This warranty shall not cover the formation of cracks or defects in substrate materials adjacent to the seal, joint movement exceeding movement rating of sealant, or physical damage caused by others.
- D. Repair or replace defective materials and workmanship during warranty period without expense to Owner, including removal and replacement of other items as required.
- E. This warranty shall be in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Provide color of exposed joint sealants as selected by Architect. Custom colors will be used.
- B. Provide joint sealers, joint fillers and other materials that are compatible with one another and with joint substrates, as demonstrated by testing and field experience.

2.2 ELASTOMERIC JOINT SEALANTS

- A. Exterior Paintable Building Sealant: Bostik Findley, Inc. "Pro MS-50", Master Builders "MasterSeal NP 150" or approved equal one-component, low modulus, solvent free, silyl-modified polyether or latex hybrid sealant.

- B. Exterior Building Sealant at Exposed Concrete and Areas where Sealant is Unpainted: Dowsil “795 Silicone” or approved equal one-part, neutral cure, RTV silicone sealant.
- C. Horizontal Joint Sealant: Two-part pourable urethane; ASTM C920, Type M; Grade P; Class 25; Uses T, M, A and O; Pecora Corp. "Urexpand NR-200", Tremco, Inc. "THC-900/THC-901" or approved equal. Horizontal joint sealant shall have a minimum Shore A hardness of 30.
- D. Butyl Sheet Metal Lap Sealant: Pecora “BC-158” or approved equal butyl sealant.
- E. Interior Building Sealant: Acrylic-emulsion; one-part, non-sag, mildew-resistant, complying with ASTM C834, formulated to be paintable; Pecora Corp. "AC-20 +Silicone", Tremco Inc. "Tremflex 834 Acrylic Latex Sealant" or approved equal.
- F. Joint Sealant at Exterior Fluid-Applied Waterproofing: Dowsil Contractors Professional Sealant (CPS) or approved equal medium modulus, one-part, neutral silicone sealant complying with ASTM C920, Type S, Grade NS, Class 35, Use NT, M, A & O.
- G. Trowel-Grade Sealant in Contact with Existing Weather Resistive Barrier: Dowsil 778 Silicone Liquid Flashing or approved equal, one-part, neutral cure, trowel grade silicone liquid flashing.

2.3 JOINT FILLERS FOR CONCRETE PAVING

- A. Joint Filler: Nomaco “Nomaflex” or approved equal polypropylene joint filler complying with ASTM D8139 and ASTM D1751.
- B. Joint Sealant: Euclid “Eucolastic 1SL” or approved equal single-component, self-leveling polyurethane sealant complying with ASTM C920 Type S, Grade P, Class 50, Use T, M, A, O and I (Class 2).

2.4 JOINT SEALANT BACKING

- A. General: Provide sealant backings which are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved by sealant manufacturer.
- B. Backer Rod at Exterior Locations: ASTM C1330, Type C, closed cell backer rods.
- C. Plastic Foam Joint-Fillers: Preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam, of size, shape, and density to control sealant depth.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: As recommended by joint sealant manufacturer for adhesion of sealant to joint substrates.
- B. Cleaners for Nonporous Surfaces: Non-staining, chemical cleaner of type acceptable to manufacturer of sealant and sealant backing materials which are not harmful to substrates and adjacent nonporous materials.
- C. Masking Tape: Non-staining, non-absorbent type compatible with joint sealants and to surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants.
 - 1. Remove foreign material from joint substrates which could interfere with adhesion of joint sealant, including dust, paints, oil, grease, waterproofing, water repellents, water, and surface dirt.

2. Clean porous surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or acid washing to produce a clean, sound substrate. Remove loose particles remaining from cleaning operations by vacuuming or blowing out joints.
 3. Remove laitance and form release agents from concrete.
 4. Clean non-porous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended by joint sealant manufacturer. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond, do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply. Provide temporary ventilation during installation of interior joint sealants.
- B. Sealant Installation Standard: Comply with recommendations of ASTM C1193 for use of joint sealants as applicable to materials, applications and conditions indicated.
- C. Sealant Depth and Width Requirements: Provide a minimum 3/8- to 3/4-inch deep sealant joint for areas subject to traffic, 1/4- to 1/2-inch deep sealant joint for areas subject to non-traffic, and a 1/2-inch minimum wide sealant joint for weather barrier and exterior joints.
- D. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
1. Install joint-fillers to provide sealant support for optimum performance cross-sectional shapes and depths.
 - a. Do not leave gaps between ends of joint-fillers.
 - b. Do not stretch, twist, puncture, or tear joint-fillers.
 - c. Remove absorbent joint-fillers which have become wet prior to sealant application and replace with dry material.
 2. Install bond breaker tape between sealants and joint-fillers, compression seals or back of joints where required to prevent third-side adhesion of sealant to back of joint.
- D. Installation of Sealants: Install sealants by proven techniques to contact and full wet joint substrates, completely filling recesses provided for each joint configuration and providing uniform, optimum performance cross-sectional shapes and depths.
- E. Tooling of Non-sag Sealants: Tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

3.3 FIELD QUALITY CONTROL

- A. Conduct field adhesion testing in accordance with ASTM C1521 with the sealant manufacturer's representative present. Conduct 10 tests in the first 1,000-feet of each sealant type and substrate followed by 1 test for every 1,000-feet thereafter if no test failure occurs.

3.4 PROTECTION AND CLEANING

- A. Protect joint sealants during and after curing periods from contact with contaminating substances or from damage.
- B. Cut out and remove damaged or deteriorated joint sealers and reseal joints with matching new materials.
- C. Clean off excess sealants or smears adjacent to joints as work progresses by methods and with cleaning materials approved by sealant manufacturers.

END OF SECTION

SECTION 08 52 13 ALUMINUM-CLAD WOOD WINDOWS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Section includes the following:
 - 1. Aluminum-clad wood windows with true divided lites.
 - 2. Glazing and accessories.

- B. Related Sections:
 - 1. Selective demolition is specified in Section 02 41 19.
 - 2. Weather barrier is specified in Section 07 25 00.
 - 3. Sheet metal flashing and trim is specified in Section 07 62 00.
 - 4. Joint sealants are specified in Section 07 92 00.

1.2 PERFORMANCE REQUIREMENTS

- A. Testing: Test each type and size of window in accordance with ASTM E330 for structural performance; ASTM E283 for air infiltration; and ASTM E1105 for water penetration.
 - 1. Structural Performance: No failure or permanent deflection for positive test pressure of 50-psf and negative pressure of 60-psf.
 - 2. Air Infiltration, Weatherstripping: Air infiltration rate of not more than 0.10-cfm per foot of operable sash joint, for an inward test pressure of 1.57-psf.
 - 3. Water Penetration: No water penetration at an inward test pressure of 8.0-psf.

1.3 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.

- B. Action Submittals:
 - 1. Product Data: Manufacturer's data sheets on each product to be used, including:
 - a. Preparation instructions and recommendations.
 - b. Storage and handling requirements and recommendations.
 - c. Project-specific installation methods.
 - 2. Shop Drawings: Include Project-specific shop drawings that indicate and identify materials to be incorporated in the work, dimensions, thickness of each material and system, and relationships to adjacent construction. Show waterproofing continuity around perimeter of the construction assembly.
 - 3. Selection Samples: For each finished product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
 - 3. Verification Samples: For each finished product specified, two samples, minimum size 6 inches square, representing actual product, color, and sheen.

- C. Information Submittals:
 - 1. Certification: Evidence of certification to specified ratings.
 - 2. Product test reports, field quality control reports, manufacturer's project acceptance documentation, qualification data.

- D. Closeout Submittals:
 - 1. Warranty.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience manufacturing aluminum-clad wood windows similar to those required for this Project.
- B. Installer Qualifications: Minimum 5 years' experience installing windows similar to those required for this Project.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Do not deliver units to the Project site until ready to install, unless indoor storage area is available.
- C. Store products in manufacturer's unopened packaging until ready for installation.

1.6 FIELD CONDITIONS

- A. Materials shall be installed in temperature range required by the manufacturer.
- B. Verify site conditions and field measurements prior to starting work.

1.7 WARRANTY

- A. Provide manufacturer's standard warranty for:
 1. Wood Members: 10 years.
 2. Aluminum Cladding Structural Performance: Lifetime.
 3. Exterior Aluminum Kynar Finish: 20 years.
 4. Insulating Glass: 20 years.
 5. Other Components: 10 years.
- B. This warranty is in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.

PART 2 – PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. Andersen Windows & Doors “E-Series” or approved equal.

2.2 WINDOWS– GENERAL

- A. Windows: Complying with AAMA/WDMA/CSA 101/I.S.2/A440; factory assembled and glazed, complete with weatherstripping, operating hardware and specified accessories.
 1. Total Jamb Depth: As indicated; provide factory-installed jamb extensions where required.
 2. U-value: 0.29.
 3. SHGC: 0.17.
 4. Visible Transmittance: 0.39.
 5. NFRC certified thermal performance.
 6. Provide windows with true divided lites as indicated.

2.3 CLAD WOOD WINDOWS

- A. Casement Windows:
 1. Rating: LC-PG40; maximum size 48- by 66-inches.
 2. Frame Depth: 2-7/8-inches.
 3. Screens:

- a. Screen Mesh: 18 by 16 charcoal colored fiberglass mesh.
 - b. Screen Frame: Aluminum, with corners mitered and secured with corner locks; spring-loaded. Color as selected from manufacturer's full range of colors.
4. Hardware:
- a. Weatherstripping: Compression type on all sash and frame meeting surfaces. Black color.
 - b. Operator: Gear type with hardened steel gears and stainless steel arms.
 - c. Operator Handle: Folding crank type.
 - d. Hinges: Concealed from exterior, with stainless steel hinge track and screws.
 - e. Locks: Two cam action concealed sash locks on each sash; provide temporary construction lock lever/operator handle for each unit.
5. Hardware Finishes: Window Hardware Exposed to View on Interior when window is closed. Finish in color selected from manufacturer's standard selection.
- B. Fixed Windows:
1. Rating: LC-PG40; maximum size 48- by 66-inches.
 2. Frame Depth: 2-7/8-inches.
- C. Wood Frame and Sash Members: Select kiln dried wood, water and insect repellent and preservative treated in accordance with WDMA I.S.4; wood members not fastened or adhered to cladding.
1. Wood Species: To be selected by the Architect.
 2. Windows: Frames laminated veneer lumber (LVL), sash solid wood.
 3. Frame Corners: Block mitered, stapled, and sealed with silicone.
 4. Sash Corners: Mortised and tenoned, glued, mechanically fastened, and sealed with silicone.
 5. Interior Finish: Factory-applied stain with clear satin finish polyurethane topcoat (water based). Color as selected from manufacturer's full line.
- D. Aluminum Cladding: Aluminum extrusions, 0.045-inch-thick minimum on both frame and sash, one piece in any one length; with mitered corners mechanically fastened with corner locks and stainless steel screws; sash cladding applied by sliding onto wood members, not fastened or adhered to wood.
1. Frame and Sash Color: To be selected by the Architect from manufacturer's standard colors.
 2. Finish: Manufacturer's highest quality coating in a low or flat sheen matching approved samples..

2.4 GLAZING MATERIALS

- A. Insulated Glazing: Sealed insulating glass; glass of thickness recommended by manufacturer for size and application; rated CBA in accordance with ASTM E 774.
1. Windows, shall be covered with a protective film applied to the interior and exterior lites to protect against damage and aid in final cleaning.
 2. Windows, Unless Indicated as Impact Resistant: Inboard and outboard lite annealed, complying with ASTM C1036.
 3. Where indicated or required by code, inboard and outboard lites shall be fully tempered complying with ASTM C1048.
 4. Type: Andersen Windows & Doors "SmartSun Glass" clear insulating glass with Low E coating as specified in Section 08 80 00.

2.5 MISCELLANEOUS MATERIALS

- A. Structural Mullion Reinforcement: As indicated on the drawings or required to comply with local code requirements; provide drip cap at horizontal zero mullions.

- B. Metal Trim Accessories: Type and configuration as required to make a complete, weatherproof installation; same finish as exterior frame.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions. Remove the existing embeds, scrub the existing surface, and install a non-shrink grout.
- C. Protect adjacent surfaces.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install a continuous perimeter sealant joint onto direct concrete surfaces.
- C. After installation adjust units for proper operation, without binding, sticking, or racking.

3.4 FIELD QUALITY CONTROL

- A. General: Cost of specified testing will be paid for by the Owner. The Contractor is responsible for scheduling and making all arrangements for testing. Testing shall be done as soon as possible after installation before the gypsum board and interior finishes are installed. Notify the window installer and manufacturer of the test schedule a minimum of one week prior to testing.
- B. Water Penetration Testing: A minimum of 1- to 2-percent of windows in the Project, but not less than three tests of each window type and configuration, shall be performed. Tests shall be performed at 5-percent, 50-percent, and 90-percent levels of complete installation.
 - 1. Testing Agency: Engage an AAMA accredited independent testing agency to perform field tests and to prepare test reports in accordance with the applicable AAMA Field Testing Specification:
 - a. AAMA 502-12 "*Voluntary Specification for Field Testing of Newly Installed Fenestration Products*".
 - b. AAMA 511-08 "*Voluntary Guideline for Forensic Water Testing of Fenestration Products*".
 - 2. Testing Methodology: Testing of windows for water resistance shall be performed according to ASTM E1105 test method and applied per the AAMA 502 with perimeter sealant joints and subframe/receptor and/or sill pan installed. Test pressure shall be equal to 2/3 of the original laboratory tested and rated performance level. Tests shall be performed using a cyclic static water test based on ASTM E1105, Procedure B. AW Grade windows shall be tested to ASTM E1105 Procedure A non-cyclic static pressure.
 - 3. Test Reports: Prepare according to AAMA 502.
 - 4. Products that do not pass the initial field testing shall be analyzed by the installer and manufacturer's representative. Upon finding the source of the issue, repairs or enhancements shall be made as required to pass the specified test pressure.

- a. Retesting of the windows shall be completed at no additional cost to the Owner.
 - b. If retesting is required, furnish written documentation identifying the steps taken to remediate the failed test.
 - c. If the source of water leakage cannot be determined, a forensic evaluation using the procedures in AAMA 511 shall be used to determine the source of the water leakage.
- C. Air Infiltration Test: Conduct tests in accordance with ASTM E783. Allowable air infiltration shall not exceed 1.5 times the amount specified in the laboratory performance requirements.
- D. Repair or remove work that does not meet requirements or that is damaged by testing at no additional cost to the Owner.

3.5 CLEANING AND PROTECTION

- A. Protect installed products until completion of the Project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.6 REPAIR

- A. Correct and repair non-conforming, damaged, or defective work.

END OF SECTION

SECTION 08 80 00 GLAZING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for exterior glass and glazing.
- B. Related Sections:
 - 1. Aluminum-clad wood windows are specified in Section 08 52 16.

1.2 DEFINITIONS

- A. Deterioration of insulating glass is defined as failure of hermetic seal due to other causes than breakage which results in intrusion of dirt or moisture, internal condensation or fogging, deterioration of protected internal glass coating resulting from seal failure, and any other visual evidence of seal failure or performance.

1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide glass and glazing that has been produced, fabricated and installed to withstand normal thermal movement, wind loading and impact loading (where applicable), without failure including loss or breakage of glass, failure of sealants or gaskets to remain watertight and airtight, deterioration of glass and glazing materials and other defects in the work.
- B. Normal thermal movement is defined as that resulting from an ambient temperature range of 120-deg. F. and from a consequent temperature range within glass and glass framing members of 180-deg. F.
- C. Provide heat strengthened glass lites where recommended by glass manufacturers as determined by glass stress analysis calculations based on glass unit sizes indicated and shading patterns occurring on the glass. Furnish copies of the glass stress analysis calculations and show the location of glass units required to be heat strengthened on the shop drawings.
- D. Surface and Optical Distortion Requirements:
 - 1. Roll Wave: Maximum 0.003-inch (central area) and +/- 100 millidiopter over 95-percent of glass surface.
 - 2. Leading and Trailing Edge: Maximum 0.008-inch lead and trail edge (edges = 12-inches) of glass surface. Maximum 0.006-inch for glass to be laminate3d.
 - 3. Center Kink: 0.001-inch measured perpendicular to direction of travel, +/- 70X millidiopter.
 - 4. Bow and Warp: Maximum localized and overall bow (warp) per lite shall be 0.031-inch per lineal foot; one-half of maximum allowed by ASTM C1048.

1.4 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Manufacturer's technical data for each glazing material and fabricated glass product required, including installation and maintenance instructions.
 - 2. Samples: 12-inch square samples of each type of glass indicated and specified except for clear single pane units, and 12-inch long samples of each type of sealant or gasket exposed to view.
- C. Closeout Submittals:
 - 1. Warranty.

1.5 QUALITY ASSURANCE

- A. Glazing Standards: Comply with the recommendations of the following manufacturer and associations except where more stringent requirements are specified:
 - 1. Glass Association of North America (GANA) "Glazing Manual" and "Sealant Manual".

2. Sealed Insulating Glass Manufacturers Association (SIGMA): TM-3000 "Vertical Glazing Guidelines".
- B. Safety Glass: Where safety glass is indicated or required, provide products complying with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for category II materials.
- C. Insulating Glass Certification Program: Provide insulating glass units permanently marked with appropriate Insulating Glass Certification Council (IGCC) certification label.
- D. Glazier Qualifications: Engage an experienced glazier who has completed glazing similar in material, design, and extent to that required for this Project, with a record of successful in-service performance.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Protect glazing materials during delivery, storage, and handling; comply with manufacturer's directions and as required to prevent edge damage to glass, and damage to glass and glazing materials from effects of moisture, temperature changes, direct exposure to sun and from other causes.

1.7 PROJECT CONDITIONS

- A. Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing material manufacturer or when glazing channel substrates are wet.
- B. Install glazing sealants at ambient and substrate temperatures above 40-deg. F.

1.8 WARRANTY

- A. Insulating Glass: Furnish written warranty signed by glass manufacturer, agreeing to furnish replacements for those insulating glass units developing manufacturing defects as defined, within 10-years from date of Substantial Completion.
- B. This warranty shall be in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS

- A. Sizes: Fabricate glass to sizes required for glazing openings indicated, with edge clearances and tolerances complying with recommendations of glass manufacturer. Thickness as indicated, specified, or recommended by glass manufacturer.
- B. Manufacture heat-treated glass by horizontal (roller hearth) process with roll wave distortion parallel with bottom edge of glass as installed.

2.2 GLASS TYPES

- A. Exterior, Clear Insulating Glass with Low E Coating: Vitro Architectural Glass "Solarban 70" or approved equal insulating glass with Low E coating, tempered where indicated or required by code. Glass thicknesses as indicated or as standard with **door and** window manufacturer.
 1. Window glazing shall meet the following requirements:
 - a. U-factor: 0.29.
 - b. Solar Heat Gain Coefficient (SHGC): 0.17.
 - c. Visible Transmittance: 0.39.
 2. Door glazing shall meet the following requirements:
 - a. U-factor: 0.32.
 - b. Solar Heat Gain Coefficient (SHGC) 0.22.
 - c. Visible Transmittance: 0.36.

- B. Exterior, Clear Insulating Glass: Clear insulating glass with tempered inside and outside lites. Glass thickness as indicated or as selected by the Architect.

2.3 ELASTOMERIC GLAZING SEALANTS

- A. General: Comply with recommendations of sealant and glass manufacturers for selection of glazing sealants with performance characteristics suitable for applications indicated and conditions at time of installation.
 - 1. Compatibility: Select sealants with proven compatibility with other materials with which they will come into contact, including glass products, seals of insulating glass units, and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.
 - 2. Suitability: Comply with recommendations of sealant and glass manufacturers for selection of glazing sealants which have performance characteristics suitable for applications indicated and conditions at time of installation.
 - 3. Colors: Color of exposed sealant as selected by Architect from manufacturer's standards.
- B. Silicone Glazing Sealant: One-part elastomeric silicone sealant complying with ASTM C920, Type S, Grade NS, Class 25, Uses NT, G, A and 0 as applicable; Dowsil "999A", GE "SCS 1200", Tremco "Proglaze" or approved equal.

2.4 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tape: Preformed, butyl-based elastomeric tape with a solids content of 100-percent, non-staining and non-migrating in contact with nonporous surfaces, with or without spacer rod as recommended by tape and glass manufacturers for application indicated, packaged in rolls with a release paper backing, complying with AAMA 800.
- B. Expanded Cellular Glazing Tape: Closed-cell, polyvinyl chloride foam tape, factory coated with adhesive on both surfaces, packaged on rolls with release liner protecting adhesive, and complying with AAMA 800 for product 810.5.

2.5 GLAZING GASKETS

- A. Dense Elastomeric Compression Seal Gaskets: Molded or extruded neoprene, EPDM, or silicone gaskets of profile and hardness required to maintain watertight seal; complying with ASTM C864, D.S. Brown Co., Maloney, Tremco or approved equal.
- B. Soft Compression Gaskets: Extruded or molded closed cell, integral-skinned neoprene, EPDM, or silicone of profile and hardness required to maintain watertight seal; complying with ASTM C509, Type II, black; D.S. Brown Co., Maloney, Tremco or approved equal.

2.6 MISCELLANEOUS GLAZING MATERIALS

- A. Compatibility: Provide materials with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Type recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Neoprene, EPDM or silicone blocks as required, 80 to 90 Shore A durometer hardness.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore A durometer hardness required by glass manufacturer to maintain glass lites in place.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement.

- F. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-extruding, non-outgassing, strips of closed-cell plastic foam of density, size, and shape to control sealant depth and otherwise contribute to produce optimum sealant performance.

2.7 FABRICATION OF GLASS AND OTHER GLAZING PRODUCTS

- A. Fabricate glass and other glazing products in sizes required to glaze openings indicated, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements.
- B. Clean cut or flat grind vertical edges of butt-glazed monolithic lites in a manner that produces square edges with slight kerfs at junctions with indoor and outdoor faces.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect work for compliance with manufacturing and installation tolerances, including those for size, squareness, offsets at corners; presence and functioning of weep system on framing having weeps; existence of minimum required face or edge clearances; and for effective sealing of joinery. Do not proceed with work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members to receive glass. Remove coatings which are not firmly bonded to substrates. Remove lacquer from metal surfaces where elastomeric sealants are to be used.

3.3 GLAZING, GENERAL

- A. Comply with printed recommendations of glass, sealants, gaskets, and other glazing materials manufacturers.
- B. Coordinate with framing system manufacturers for proper glazing channel dimensions to provide for necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with acceptable tolerances.
- C. Protect glass from edge damage during handling and installation.
 - 1. Use a rolling block in rotating glass units to prevent damage to corners. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass with flares or bevels along one horizontal edge which would occur in vicinity of setting blocks so that these are located at top of opening.
 - 2. Remove and dispose of glass units with edge damage or other imperfections of a kind that would weaken glass when installed and impair performance and appearance.
- D. Apply primers to joint surfaces where required for sealant adhesion.
- E. Install setting blocks of proper size in sill rabbet, located to comply with referenced glazing standard. Set blocks in thin course of sealant.
- F. Provide spacers inside and out, of size and spacing to preserve required face clearances for glass sizes larger than 50 united inches (length plus height), except where gaskets or glazing tapes with continuous spacer rods are used. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width, except with sealant tape use thickness slightly less than final compressed thickness of tape.
- G. Provide edge blocking to comply with requirements of referenced glazing standard except where otherwise required by glass unit manufacturer.
- H. Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.

- I. Where wedge-shaped gaskets are driven into one side of the channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
- J. Square cut wedge-shaped gaskets at corners and install gaskets in manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that when compressed by glass their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously but not in one continuous length. Do not stretch tapes to make them fit opening.
- C. Where framing joints are vertical, cover these joints by applying tape to heads and sills first and then to jambs. Where framing joints are horizontal, cover these joints by applying tape to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until just before each lite is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward center of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

- A. Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with stretch allowance during installation.
- B. Secure compression gaskets in place with joints located at corners to compress gaskets producing a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- C. Install gaskets so they protrude past the face of glazing stops.

3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel weep systems until sealants cure. Secure spacers in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass. Install pressurized gaskets to protrude slightly out of channel to eliminate dirt and moisture pockets.

3.7 PROTECTION AND CLEANING

- A. Protect glass from breakage. Do not apply markers to the surfaces of glass. Remove non-permanent labels and clean surfaces.

- B. Protect glass from contact with contaminating substances. Remove immediately by methods recommended by glass manufacturer.
- C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction for build-up of dirt, scum, alkali deposits or staining. Remove as recommended by glass manufacturer.
- D. Remove and replace glass which is broken, chipped, cracked, abraded or damaged during construction, including natural causes, accidents and vandalism.
- E. Wash glass on both faces not more than 4-days prior to date scheduled for inspection for Substantial Completion. Use methods recommended by glass manufacturers.

END OF SECTION

SECTION 08 91 00 LOUVERS AND VENTS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing the following:
 - 1. Foundation / crawlspace vents.
- B. Related Sections:
 - 1. Painting is specified in Section 09 91 00.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Shop Drawings: Furnish shop drawings of louver units and accessories. Include plans, elevations, sections, and details showing profiles, angles, spacing of louver blades, unit dimensions related to wall openings and construction, free areas for each size, and profiles of frames at jambs, heads, and sills.
 - 2. Samples: 6-inch square samples of each required finish. Prepare samples on metal of same gauge and alloy to be used in work.

1.3 QUALITY ASSURANCE

- A. Comply with Sheet Metal and Air Conditioning Contractors National Association (SMACNA) recommendations for fabrication, construction details and installation procedures, except as otherwise indicated.
- B. Welding Standards: Comply with applicable provisions of D1.2 "Structural Welding Code - Aluminum" and D1.3 "Structural Welding Code - Sheet Steel".

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify size, location and placement of louver units prior to fabrication, and show on shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the work.

PART 2 - PRODUCTS

2.1 FABRICATION

- A. Provide louvers and accessories of design, materials, sizes, depth, arrangement, and metal thicknesses indicated or as required.
- B. Assemble louvers in shop to minimize field splicing and assembly. Disassemble units as required for shipping and handling limitations. Mark units for reassembly and coordinated installation.
- C. Maintain equal louver blade spacing, including separation between blades and frames at head and sill, to produce uniform appearance.

- D. Fabricate louvers as integral nail fin units. Louvers shall have a continuous nail fin on all four sides for a watertight installation.
- E. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances of louvers, adjoining construction, and perimeter sealant joints.
- F. Include supports, anchorages, and accessories required for complete assembly.
- G. Provide sill extensions and loose sills made of same material as louvers where required for drainage to exterior and to prevent water penetrating to interior.
- H. Join frame members to one another and to stationary louver blades by welding, except where otherwise indicated or where field bolted connections between frame members are required. Maintain equal blade spacing, including separation between blades and frames at head and sill.

2.2 FOUNDATION / CRAWLSPACE VENTS

- A. Approved Manufacturer: Vulcan Vent "Foundation Vents" or approved equal.
- B. Frame and Flange: 26-gauge G90 galvanized steel.
- C. Intumescent Core: 5 mm hexagonal aluminum matrix with intumescent coating.
- D. Ember Mesh: 14 mesh, type 304 stainless steel.
- E. Vent Size: As indicated.
- F. Finish: Field painted as specified in Section 09 91 00.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate and place louvers plumb, level and in proper alignment with adjacent work.
- B. Use concealed anchorages wherever possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
- C. Form closely fitted joints with exposed connections accurately located and secured.
- D. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.
- E. Repair finishes damaged by cutting, welding, soldering and grinding operations required for fitting and jointing. Restore finishes with no evidence of corrective work. Return items that cannot be refinished in the field to the shop, make required alterations, and refinish entire unit, or provide new units.
- F. Protect galvanized and non-ferrous metal surfaces from corrosion or galvanic action by application of a heavy coating of bituminous paint on surfaces which will be in contact with concrete, masonry or dissimilar metals.
- G. Install concealed gaskets, flashings, joint fillers, and insulations, and install as work progresses to make installations weather-tight.

3.2 ADJUSTING AND PROTECTION

- A. Protect louvers and vents from damage during construction, including use of temporary protective coverings where required.
- B. Restore louvers and vents damaged during installation and construction so that no evidence remains of corrective work. If restoration results are unsuccessful as judged by the Architect, remove damaged units and replace with new units.

3.3 CLEANING

- A. Periodically clean exposed surfaces of louvers and vents that are not protected by temporary covering to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
- B. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Rinse surfaces thoroughly and dry.

END OF SECTION

SECTION 09 21 13 INTERIOR PLASTER REPAIR

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section includes the following:
 - 1. Patching of existing plaster wall surfaces where damaged or removed by construction activities including window removal and installation.
 - 2. Patching of existing cracked, spalled or other damaged plaster surfaces.
- B. Related Sections:
 - 1. Portland cement plaster is specified in Section 09 24 00.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Samples: 8-inch square sample of plaster finish showing proposed texture to match existing.
- C. Information Submittals:
 - 1. Manufacturer's Data: Submit manufacturer's specifications and installation instructions for each material. Include other data as may be required to show compliance with the Specifications.
 - 2. Qualification data for firms and persons specified in the Quality Assurance article to demonstrate their capabilities and experience. Include a list of completed projects with project name, address, names of Architects and Owners, and other specified information.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Work shall be performed by skilled subcontractors having not less than 5-years experience in comparable plaster restoration including work on at least two projects similar in scope and scale to this Project. Submit references with name of contact person and telephone number for the two submitted similar projects.
 - 1. Only skilled plasterers who are familiar and experienced with the specified methods are to be used for the work.
 - 2. One skilled plasterer shall be present during execution of the work and shall personally direct the work.
- B. Allowable Tolerances: All plaster repairs shall be keyed and feathered to match and continue edges and contours of existing plaster work. Repairs shall be true and flat in connection with adjacent surfaces when checked with an 8-foot straight edge; do not exceed 1/8-inch variation in 8-feet for bow, warp, plumb, or level for flat and curved surfaces.
- C. Field Mock-Up:
 - 1. Prior to beginning work and after manufacturer's data and initial samples have been approved, prepare a mock-up of one plaster installation and repair at a window directed by the Architect.
 - 2. The approved mock-up will represent acceptable technique and appearance for each type of plaster work.
- D. Defects:
 - 1. Plastering with defects of such character as will mar the appearance of finished work, or which is otherwise defective, shall be rejected, removed and replaced at the Contractor's expense.
 - 2. Any defects or irregularities of plaster restoration work telegraphing through paint shall be cause for rejection of the work. The contractor shall remove any subsequent work, remove and replace the defective or irregular plaster restoration work, and have the subsequent work replaced by skilled workers in the appropriate trades, to the satisfaction of the Architect at the Contractor's expense.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Deliver materials in original packages, containers, or bundles bearing brand name, identification of manufacturer, type and grade.
- C. Store materials inside, under cover, and in manner to keep them dry, protected from weather, direct sunlight, surface contamination, aging, corrosion, and damage from construction traffic and other causes.
- D. Protect plaster and cementitious material from dampness and intrusion of foreign material.

1.5 PROJECT CONDITIONS

- A. Examine surfaces which are to receive plaster repairs. Notify the Architect in writing, of conditions detrimental to the proper and timely completion of the work. Do not proceed with the plaster work until unsatisfactory conditions have been corrected.
- B. Protect contiguous work from rusting or soiling as a result of plastering operations. Make provisions to minimize spattering of plaster on other work.
- C. Interior Plaster Work: Maintain uniform temperature of not less than 55-deg. F. in spaces to receive plaster finish. Maintain temperature for a period of not less than one week prior to application of plaster, while plaster is being installed and thereafter. Distribute heat uniformly and provide natural or mechanical means of ventilation to properly dry plaster during and after application. Comply with the requirements of ANSI standards.
 - 1. Salamander type heaters shall not be used to expedite drying.

PART 2 – PRODUCTS

2.1 PLASTER MATERIALS

- A. Gypsum Plaster Base-Coat Materials:
 - 1. Plaster: ASTM C28 gypsum neat hard wall type, fibrated.
 - 2. Sand: Natural or manufactured sand complying with ASTM C35.
 - 3. Water: Clean, fresh, potable and free of mineral or organic matter which can affect plaster.
- B. Finish Coat Materials for Plaster:
 - 1. Gypsum Plaster: ASTM C28 mixture of gauging plaster and lime.
 - 2. Water: Clean, fresh, potable and free of mineral and organic matter which can affect plaster.
 - 3. Texture: Match existing adjacent finish, evenly troweled, for all interior surfaces.

2.2 METAL LATH

- A. Expanded Metal Lath if Required to Match Existing Plaster Assembly: Fabricate expanded metal lath from copper bearing steel sheet to produce lath complying with ASTM C847 for type, configuration, and other characteristics specified. Provide hot-dipped galvanized lath with a coating of G60 in accordance with ASTM A525.
 - 1. Flat, diamond mesh, 3.4-lb./sq. yd. self-furring type.

2.3 ACCESSORIES

- A. General: Comply with material provisions of ASTM C841; coordinate depth of accessories with thicknesses and number of plaster coats required.
- B. Fabricate metal plaster accessories form not less than 26-gauge, zinc-coated steel, except as otherwise indicated.
- C. External Corner Beads: Provide small-nose, metal, corner bead with rigid nose, not exceeding 3/16-inch and expanded flanges at least 2-1/2-inches wide.

- D. Casing Beads: Fabricate from not less than 26-gauge, zinc-coated steel; provide the following types:
 - 1. Where plaster abuts dissimilar construction, provide modified or semi-square-edge metal casing bead.
- E. Base Screed: Provide metal screeds designed to act as ground and dividers between plaster and other base materials.
- F. Corner Reinforcing: Expanded metal lath strips 6-inch wide bent to form 3-inch wings, fabricated from copper bearing steel, and weighing not less than 2.5-pounds per square yard.
- G. Strip Reinforcing: Expanded, self-furring metal lath, fabricated from copper bearing steel and weighing not less than 2.5-pounds per square yard.

2.4 MISCELLANEOUS MATERIALS

- A. Bonding Agent: Liquid bonding agent specifically formulated for bonding plaster to plaster and structurally sound interior surfaces and complying with ASTM C631.

2.5 MIXING

- A. Mechanically mix cementitious and aggregate materials for plasters to comply with applicable referenced application standard and with recommendations of plaster manufacturer.
- B. Use materials without admixture of materials other than those specified. No re-tempering or retarding of partially set plaster mixes will be permitted, trade custom or local practices notwithstanding.
- C. Mix plaster in a batch type mixer at the construction site. Frozen, caked or lumpy material shall not be used. Clean mixer of all set or hardened material before materials for a new batch are loaded.
- D. Mix each batch of plaster separately. Thoroughly mix to obtain uniformity of color and workable consistency of mass and only in such quantities as will be used before it has started to set.
- E. Machine mix finishing hydrated limes with amount of water called for in printed directions of the manufacturer to form a putty. Normal finishing hydrated lime shall be soaked for 16 hours or overnight before using; special finishing hydrated lime shall be allowed to stand for 15-minutes before using. Treat hydrated lime in a manner to obtain smooth or lump-free putty. Protect the putty from sun and take preventive measures to prevent excessive evaporation while stored.
- F. Batches for base coats shall not be more than an amount that can be entirely used within two hours. Batches for finish coats shall not be more than an amount that can be entirely used within 30 minutes.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Examine surfaces to which the work is to be applied and notify the Architect of existing conditions that are detrimental to proper installation of work. Commencement of work of this Section shall be construed as acceptance of surfaces and conditions as suitable.
- B. Carefully examine grounds and accessories which shall be straight, plumb, level, square, and true to required angles, ready to accept plaster application.
- C. Check and ensure that expansion joints are properly located and that plaster thickness will finish against adjacent materials in accordance with the details.

3.2 PREPARATION

- A. Prepare surfaces to receive lath and plaster by cleaning and removing loose material and other deleterious substances which might impair the work. Installation of lath and plaster shall constitute acceptance of the surfaces by the plasterer, who shall correct imperfections in plaster resulting from improper preparation of substrate.

- B. Apply bond coat to existing masonry or plaster surface receiving new plaster, in compliance with bond coat manufacturer's specifications. Apply scratch coat directly over the bonding compound.

3.3 METAL LATHING

- A. Apply metal lath as a base for conventional 3-coat plaster work over wood framing if required to match the existing plaster assembly.
- B. Apply metal lath taut, with long dimension perpendicular to supports.
- C. Lap horizontal edges and ends of lath 1-inch. Lap horizontal edges spanning 16-inches or more a minimum of 2-inches. Nail or wire securely and rigidly in place. Secure end laps with tie wire where they occur between supports.

3.4 INSTALLATION OF PLASTERING ACCESSORIES

- A. General: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories of type indicated. Miter or cope accessories at corners; install with tight joints and in alignment. Attach accessories securely to plaster bases to hold accessories in place and alignment during plastering.
- B. Accessories: Provide the following types to comply with requirements indicated for location:
 - 1. Corner Beads: Install at external corners.
 - 2. Casing Beads: Install between plaster and vertical dissimilar surfaces and where indicated. Secure at ends and not more than 12-inches on center. When placing casing bead allow 1/4-inch opening between bead and adjacent plaster.
- C. Installation of Plaster Accessories:
 - 1. Attach plaster accessories to plaster base or substrates with galvanized fasteners spaced not more than 8-inch on center. Use not less than 18-gauge wire tie for attachment to metal lath. Nail to masonry and concrete.
 - 2. Use single length metal beads wherever length of run does not exceed longest standard stock length available. Miter or cope at corners.
 - 3. Set beads level, plumb and true to line. Shim as required and align joints with concealed splices or tie plates.
 - 4. Where reveals are indicated to be formed by casing beads, provide sheet metal closures.
 - 5. Install base where required as grounds and as separations between different types of plaster.
 - 6. Install prefabricated sheet metal items required to be "plastered-in" flush, as indicated and in accordance with manufacturer's instructions. Coordinate with installation of other work so that plaster will finish plumb and flush.

3.5 PLASTER APPLICATION

- A. Do not use materials which are caked or lumpy or which are dirty or contaminated by foreign materials. Use only clean water, free from impurities which might impair the plaster work.
- B. Minimum Thickness: Apply plaster with required thicknesses when measured from face of plaster base to face of unfinished plaster surface, as established ANSI standards for the types of bases occurring in the work, unless otherwise indicated or required for fire-resistance ratings.
- C. Execute work to provide a finish free from depressions, bulges, slick spots, scratches, brush and tool marks, cracks, visible joints, crazing, and discolorations. Surfaces shall have true planes, with uniform texture to match the adjoining surfaces and with lines and arrises that are straight, plumb and level. Work shall be true to grounds and guidelines and free from blemishes and defects of any sort.
- D. Exposed-to-View Applications:
 - 1. Masonry Base: Apply scratch and brown coat in one operation, doubling back and out to grounds ready for finish coat.
 - 2. Finish Plaster: Apply finish coat to a minimum 1/8-inch thickness.
 - 3. Finish shall match existing adjacent plaster finishes.

3.6 PATCHING AND REPAIRS TO EXISTING PLASTER

- A. General: Verify existing conditions and make all repairs and prepare all surfaces as required to obtain a complete and first-class job. Comply with plaster manufacturer's recommendations for preparation of surfaces. Perform all work methods only as scheduled and specified for each type of repair.
- B. Preparation: Scrape and sand existing plaster surfaces to be repaired, removing all loose and peeling paint.
- C. Removals: Carefully remove all existing plaster that is loose, friable, bubbled, crumbling or otherwise deteriorated or unsuitable to remain. Make clean, sharp edges beveled inward to insure firm bond of new plaster.
- D. Cracks Less than 1/6-inch Wide: To pre-wetted surface, apply a thin slurry coat consisting of finish coat ingredients. Smooth and match texture of adjacent surface.
- E. Cracks 1/6-inch to 1/4-inch Wide: Widen crack slightly, then fill with approved basecoat plaster mix. Work the coat to match texture of adjacent surfaces.
- F. Small Holes (less than 4-inch in diameter): Use 2 coat system, consisting of one layer of basecoat, allowed to set, but not dry, followed by one layer of finish coat troweled to a smooth, level surface. Finish coat shall match existing adjacent surface.
- G. Large Cracks (greater than 1/4-inch): and Large Holes (greater than 4-inch diameter): Remove unsound or un-keyed plaster to sound plaster on either side of crack or hole. Apply metal lath to cleared area if existing substrate includes lath. Apply approved bonding agent to substrate. Apply plaster base and finish flush with adjacent surfaces. Finish coat shall match existing adjacent surface.
- H. Paint as specified in Section 09 91 00.

3.7 FIELD QUALITY CONTROL

- A. The Contractor shall be responsible for determining the most effective procedure for curing and time lapse between application of coats, based on climatic and job conditions. Plaster which is excessively cracked or crazed due to improper timing and curing, will not be accepted. Remove and replace defective plaster, including plaster base materials, if damaged during removal of defective plaster.

3.8 ADJUST AND CLEAN

- A. Cutting and Patching: Cut, patch, repair and point up plaster as directed by the Architect. Repair cracks and indented surfaces by moistening plaster and filling with new material, troweled or tamped flush with adjoining surfaces. Point up finish plaster surfaces around items which are built into or penetrate plaster surfaces.
- B. Cleanup: Promptly remove plaster from door frames, windows and other surfaces which are not to be plastered. Repair floors, walls and other surfaces which have been stained, marred, or otherwise damaged by the plastering work. When plastering work is completed, remove unused materials, containers and equipment and clean floors of plaster debris; and leave broom clean.

3.9 PROTECTION

- A. Provide final protection and maintain plaster free from deterioration and damage until the time of final acceptance of the work.

END OF SECTION

SECTION 09 24 00 PORTLAND CEMENT PLASTER

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for the following:
 - 1. Patching and repair of existing exterior cement plaster as indicated and required.
 - 2. Portland cement plaster at concrete stair sidewalls.
- B. Related Sections:
 - 1. Painting is specified in Section 09 91 00.

1.2 SUBMITTALS

- A. General: Comply with the requirements in Division 01.
- B. Action Submittals:
 - 1. Product Data: Manufacturer's written recommendations, proportion mixes, and installation instructions for each product, including data showing compliance with specified requirements.
 - 2. Samples: For verification purposes, furnish units at least 12-inches square sets of each type of texture and color, showing full range of variations expected in the completed work.
- C. Information Submittals:
 - 1. Product test reports, field quality control reports, manufacturer's project acceptance documentation, and qualification data.
- D. Closeout Submittals:
 - 1. Warranty.

1.3 QUALITY ASSURANCE

- A. Code Requirements: Comply with applicable requirements of California Building Code (CBC) Chapter 25.
- B. Allowable Tolerances of Finished Surface: Maximum deviation from true plane shall not exceed 1/4-inch as measured from the line of a 10-foot straightedge placed at any location on the surface.
- C. Installer shall have a minimum of 5 years' experience on projects of similar size and scope including plaster patching and repair.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements in Division 01.
- B. Deliver manufactured materials in original unopened packages or containers with manufacturer's label intact and legible.
- C. Keep cement and lime dry, stored off the ground, under cover, and away from damp surfaces.
- D. Remove wet and deteriorated materials from Project site.

1.5 JOB CONDITIONS

- A. General: Comply with ASTM C926 requirements.
- B. Environmental Requirements:
 - 1. Take precautionary measures necessary to ensure that excessive temperature changes do not occur.

2. Cold Weather Requirements: Do not apply cement plaster unless minimum ambient temperature of 50-degrees F. has been and continues to be maintained for a minimum of 48-hours prior to application and until plaster is cured.
 3. Hot Weather Requirements: Protect cement plaster from uneven and excessive evaporation during hot, dry weather.
- C. Protection:
1. Cover areas adjacent to plastering work with plastic film.
 2. Protect finished surfaces installed prior to plastering by covering with a suitable non-staining material. Cover metal frames with plastic film.
 3. Maintain protection in place until completion of plastering work.
- D. Pre-Application Conference: Prior to commencement of plaster patching, hold a pre-application conference at the Project site to discuss materials and procedures to be used. Conference shall be attended by the University's Representative, Contractor, and plastering subcontractor.

1.6 WARRANTY

- A. Installer Warranty: Promptly correct any work that is defective or not in accordance with the Contract Documents for a period of 5 years from the date of Substantial Completion. This warranty is in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.

PART 2 - PRODUCTS

2.1 METAL LATH AND ACCESSORIES

- A. Metal Lath: ASTM C847, cold-rolled carbon steel sheet with ASTM A653 G60 (Z180) galvanized coating.
1. Self-Furring Welded Wire Lath: Structa Wire Corp. "Structalath Twin Trac 2.5", ICC ESR-2017 or approved equal welded wire lath, 17-gauge galvanized steel wire welded to form 1-inch x 1-1/2-inch openings with secondary cold-rolled longitudinal wires.
 - a. Weight: 1.14-lb/sq. yd.
 - b. Finish: Class 1 galvanized coating complying with ASTM A641.
 2. Self-Furring Welded Wire Lath for Stud Spacing over 16-inches on Center: Structa Wire Corp. "Megalath", ICC ESR-2017 or approved equal self-furring welded wire lath, 17-gauge x No. 16 galvanized steel wire welded to form 0.7-inch x 1.5-inch openings with five additional secondary cold-rolled longitudinal wires spaced every 6.5-inches.
 - a. Weight: 1.95-lb./sq. yd.
 - b. Finish: Class 1 galvanized coating complying with ASTM A641.
- B. Fasteners:
1. General: Fasteners shall comply with ASTM C1063.
 2. Fasteners for Securing Metal Lath to Wood Framing:
 - a. 1-1/2-inch roofing nails for horizontal applications and 1-inch roofing nails, 1-inch-wide crown staples, or 6d common nails bent over to engage at least three strands of lath for vertical applications. Fasteners shall be of sufficient length to penetrate a minimum of 3/4-inch into stud.
 - b. Staples or nails used to attach 3/8-inch rib lath shall penetrate horizontal framing members a minimum of 1-3/4-inch and vertical framing members a minimum of 3/4-inch. Nails shall be bent over the rib or the staple shall straddle the rib.
 3. Fasteners for Securing Metal Lath to Metal Framing:
 - a. Corrosion-resistant screws complying with ASTM C1002 for attachment to metal framing 25-gauge and lighter framing and ASTM C954 for attachment to metal framing 20-gauge and heavier. Minimum head size shall be 7/16-inch with a pan or wafer head large enough to engage at least three strands of lath.
 - b. Screws shall have a minimum #8 shank and shall penetrate the framing a minimum of 3/8-inch.
 4. Fasteners for Securing Metal Lath to Concrete or Concrete Block: Hardened concrete stub nails, minimum 3/4-inch long with minimum 3/8-inch heads, in rows not more than 16-inches on center with fasteners spaced a maximum of 7-inches on center along each row. Provide additional powder-actuated fasteners located at each corner and midway along the long edge of the sheet.
 5. Tie Wires: No. 18-gauge, galvanized, single strand annealed steel.

- C. Metal Accessories:
1. General: Comply with ASTM C1063, minimum 26-gauge galvanized steel or zinc alloy, perforated or expanded flanges. Galvanized surfaces to be field painted shall be bonderized. Coordinate depth of trim and accessories with plaster thickness and number of plaster coats required.
 2. Corner Beads: Small-nose type unless otherwise indicated.
 3. Casing Beads: No. 66 square edge.
 4. Corner Reinforcement: Cornerite, minimum 1.75-pounds per square yard expanded metal lath with minimum 2-inch legs.
 5. Strip Reinforcement: For reinforcing joints of dissimilar materials and diagonal reinforcement at opening corners, minimum 1.75-pounds per square yard expanded metal lath.

2.2 BASE COAT MATERIALS

- A. General:
1. Contractor shall have the option of using BMI Products 690 Plaster, ICC ESR-2535 or approved equal proprietary portland cement with plasticizing agents and admixtures, plastic cement, or a blended cement that meets ASTM C926 and CBC Chapter 25.
 2. Plaster materials shall be as required to match existing.
- B. Portland Cement: ASTM C150, Type I - II, low alkali.
- C. Plastic Cement: ASTM C150, Type I or Type II, with added plasticizers not exceeding 12-percent of total volume of cement. When used, volume of plastic cement shall not exceed 50-percent content in mix.
- D. Aggregates: ASTM C897.
1. Gradation, Base (Scratch and Brown) Coats:

U.S. Standard Sieve	Percent Retained by Weight (+2%)	
	Minimum	Maximum
No. 8 (2.35 mm)	0	10
No. 16 (1.18 mm)	10	40
No. 30 (600 um)	30	65
No. 50 (300 um)	70	90
No. 100 (150 um)	95	100
 2. Independent Testing Agency shall sample aggregate on the Project site and test for compliance with specified ASTM C897 standard.
- E. Fiber Reinforcing: 1/2-inch alkaline-resistant chopped-glass fibers or alkaline-resistant polypropylene fibers. Detergent admixtures or clay to aid in pumping plaster will not be permitted.
- F. Water: Clean, potable, and free from substances harmful to plaster.
- G. Admixtures:
1. Air Entraining Agent: ASTM C260.
 2. Water-reducing Agent: ASTM C494, Type A.
 3. Workability Enhancing Agent: Gibco PRF or approved equal lime replacement.
- H. Bonding Agent: Type suitable for bonding cement plaster to concrete or concrete unit masonry surfaces; Sika "Liquid Weld", Omega Products International "Akroloc", "Polyloc" or "Bondcrete", Larsen Products Corp. "Weld-Crete Concrete Bonding Agent", Merlex "Superhold" or approved equal.

2.3 FINISH COAT MATERIALS

- A. Factory-prepared product containing all materials required for finish coat, except water; BMI Products, Omega Products International, Parex USA / La Habra, or approved equal; texture to match approved sample and existing plaster. Plaster will be field painted as specified in Section 09 91 00.

2.4 CEMENT PLASTER

- A. Mixing:
1. General:
 - a. Accurately proportion materials for each plaster batch with measuring devices of known volume.
 - b. Size batches for complete use within maximum of one-hour after mixing.
 - c. Re-temper plaster stiffened from evaporation, but do not use or re-temper partially hydrated cement plaster.
 - d. Do not use caked or lumping materials.
 - e. Mix factory-prepared plaster if used in accordance with the manufacturer's written instructions.
 - f. Use moist, loose sand in mix proportions.
 - g. Withhold 10-percent of mixing water until mixing is almost complete, then add as needed to produce necessary consistency.
 2. Mechanical Mixing:
 - a. Clean mixer of set or hardened materials before loading for new batch.
 - b. Maintain mixer in continuous operation while adding materials.
 - c. Conform to mixing sequence and time recommended by manufacturer of plaster materials. Add fibers by sprinkling in mix during last 2-minutes of mixing cycle.
 3. Hand Mixing: Do not hand-mix unless authorized by Architect.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that surfaces to be plastered are free of dust, loose particles, oil, and other foreign matter which would affect bond of plaster coats.
- B. Examine construction, grounds, and accessories to ensure that finished plaster surfaces will be true to line, level, and plumb, without requiring additional thickness of plaster.
- C. Do not commence installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Solid surfaces shall have the suction and surface roughness to provide the bond required for the plaster.
- B. Prepare smooth and nonabsorbent solid surfaces including cast-in-place concrete, precast concrete, or concrete masonry to receive portland cement plaster in accordance with CBC Section 2510.7.

3.3 INSTALLATION OF METAL LATH

- A. Exterior Surfaces: Comply with CBC Table 2507.2.
 1. Attach to wood or metal framing or solid backing with specified fasteners spaced 6-inches apart. All fasteners shall penetrate the specified distance into framing.
 2. Where solid backing is not provided, apply with long dimension of sheets perpendicular to supports.
 3. Self-Furring Welded Wire Lath: Apply self-furring wire lath in accordance with manufacturer's instructions. Fasteners may attach at the furring crimps on the vertical cross wire, at the intersection of the longitudinal wire and cross wire or a point along the longitudinal wires.
 4. Lap sides not less than 1/2-inch and ends not less than 1-inch. Lap wire fabric not less than one mesh at sides and ends or 1-inch, whichever is greater. Lap rib lath at sides by nesting outside ribs. Vertical laps shall occur at a structural support.
 5. Where two sheets of lath overlap horizontally between framing members, wire-tie laps between supports at intervals not exceeding 9-inches.
 6. Metal lath shall be continuous in corners.
 7. Where no external corner reinforcement is used, lath shall be furred out and carried around corners at least one support on frame construction.
- B. Installation of Metal Accessories:

1. General:
 - a. Install in accordance with ASTM C1063 and C1047 at locations indicated or required.
 - b. Wire tie in place as required to prevent dislodging or misalignment by subsequent operations. Attach over required layers of building paper.
 - c. Fasten at both ends and at a maximum of 12-inches on center along sides.
 - d. Bring grounding edge of accessories to true lines, plumb, level, and straight.
 - e. Install accessories to provide required depth of plaster and to bring plaster surface to required plane.
 - f. Connect lengths of accessories as recommended by the manufacturer to assure a continuous line.
 - g. Install continuous corner reinforcement for full length of external corners.
 - h. Install casing beads to provide a minimum 1/8-inch clearance between structural units and termination points of surfaces to receive plaster finish.
2. Beads:
 - a. Use single length of metal beads wherever length of run does not exceed longest standard stock length available. Miter or cope corners.
 - b. Set beads level, plumb, and true to line. Shim as required and align joints with concealed splices or tie plates.
 - c. Provide casing beads at the following locations:
 - 1) Where plaster abuts dissimilar construction.
 - 2) At perimeter of openings where edges of plaster will not be concealed by other work.

3.4 APPLICATION

- A. General: Comply with ASTM C926 for applications indicated and specified.
- B. Number of Coats: Provide number of coats required to match existing.
- C. Two-Coat Application:
 1. Apply plaster by hand or machine spray.
 2. Interrupt any plaster coat only at junctions of plaster planes, at openings, or at control joints.
 3. Apply base coat over bond-dash coat or bonding agent bringing out to grounds, flat to true surface, and free of imperfections which would reflect in finish coat; and score to assure bond with finish coat.
 4. Apply finish coat with sufficient material and pressure to ensure tight contact with and coverage of base coat.
 5. Nominal Plaster Thicknesses Measured from Face of Plaster Base:
 - a. Bonding Agent and Base Coat: 1/4-inch
 - b. Finish Coat: 1/8-inch
 - c. Total: 3/8-inch
- D. Three-Coat Application over Metal Lath:
 1. Apply plaster by hand or machine spray. If machine applied, use only experienced machine applicator. Slump for machine applied plaster shall be between 2-1/2- to 4-inches at mixer and 2- to 3-1/2-inches at nozzle.
 2. Interrupt plaster coats only at junctions of plaster planes, at openings, or at control joints.
 3. Apply scratch coat with sufficient material and pressure to form full keys through and to embed metal lath. When firm, score in one direction to provide bond with brown coat.
 4. Apply brown coat to scratch coat, bringing out to grounds, flat to true surface, and free of imperfections which would reflect in finish coat. Reconsolidate brown coat by floating and roughen to assure bond with finish coat.
 5. Double-back method of application of scratch and brown coat is acceptable providing specified thickness is maintained.
 6. Apply finish coat in accordance with manufacturer's instructions and uniformly float to true, even surface.
 7. Nominal Plaster Thickness Measured from Face of Lath, in accordance with ASTM C929, Table 4:
 - a. Scratch Coat: 3/8-inch, minimum.
 - b. Brown Coat: 3/8-inch.
 - c. Finish Coat: 1/8-inch, minimum.

- E. Curing:
 - 1. Maintain moist conditions by fine fog spraying.
 - 2. Cure scratch coat for a minimum of 48-hours and maintain a minimum of 48-hours between application of scratch coat and brown coat.
 - 3. Cure brown coat for a minimum of 48-hours and maintain a minimum of 7-days between the application of the brown coat and finish coat.

3.5 COMPLETION

- A. Patching:
 - 1. Upon completion of application, point up plaster around trim and other locations where plaster meets dissimilar materials.
 - 2. Cut out and patch defective or damaged plaster.
 - 3. Match patching of defective or damaged plaster to existing work in form, texture, and color.
- B. Cleaning and Protection:
 - 1. Remove plaster and protective materials from control and expansion joints, perimeter beads, and adjacent surfaces.
 - 2. Remove stains that would adversely affect subsequent finishes on plaster.
 - 3. Protect adjacent surfaces from the work of this Section.
- C. When complete, plaster surfaces shall be flat or uniformly curved, true to plane; and free from scaffold and tool marks, stains, or other damage or defects and shall be uniform in color and texture.

3.6 CORRECTION AND REPAIR

- A. Correct and repair non-conforming, damaged, or defective work.

END OF SECTION

SECTION 09 29 00 GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes the requirements for furnishing and installing the following:
 - 1. Gypsum board and associated accessories required for patching and repair of existing.
- B. Related Requirements:
 - 1. Aluminum-clad wood windows are specified in Section 08 52 16.
 - 2. Painting is specified in Section 09 91 00.

1.2 QUALITY ASSURANCE

- A. Provide products manufactured in North America only.
- B. Gypsum board work shall comply with ASTM C840 and California Building Code (CBC) Section 2508 unless otherwise indicated or specified.
- C. Installation and finishing of gypsum board shall comply with GA-216. Installation of fire-rated gypsum board shall comply with their listing descriptions indicated on the Drawings.
- D. Fire-Resistance Ratings: Where gypsum board systems with fire-resistance ratings are indicated, provide materials and installations identical with those of applicable assemblies tested in accordance with ASTM E119 by fire testing laboratories acceptable to authorities having jurisdiction.
 - 1. Provide fire-resistance-rated assemblies identical to those indicated by reference to GA File No's. in GA-600 "Fire Resistance Design Manual" or to design designations in UL "Fire Resistance Directory" or in listing of other testing and agencies acceptable to authorities having jurisdiction.
- E. Allowable Tolerances:
 - 1. Gypsum board surfaces shall have no measurable variation in any 2-foot direction and a maximum variation of 1/8-inch in 10-feet when a straightedge is laid on the surface in any direction. Specified tolerances apply to both plumbness of walls and levelness of ceilings.
 - 2. Shim work as required to comply with specified tolerances.
 - 3. Do not exceed 1/16-inch offset between planes of abutting sheets at edges or ends.

1.3 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Delivery:
 - 1. Deliver materials to the Project site in original package containers or bundles with manufacturer's labels intact and legible.
 - 2. Deliver fire-rated materials bearing the testing agency's label and classification identification.
- C. Storage:
 - 1. Store gypsum board in accordance with GA-238 and manufacturer's recommendations.
 - 2. Store materials indoors in a dry area, under cover, and stacked flat off the floor.
 - 3. Stack gypsum boards so that long lengths are not over short lengths.
- D. Handle gypsum board to avoid damaging the face and edges of sheets.
- E. Protect metal corner beads and trim from being bent or damaged.

1.4 PROJECT CONDITIONS

- A. Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C840 and with gypsum board manufacturer's recommendations.

- B. Minimum Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40-deg. F. For adhesive attachment and finishing of gypsum board, maintain not less than 50-deg. F. for 48-hours prior to application and continuously thereafter until drying is complete.
- C. Ventilate building spaces to remove water not required for drying joint treatment materials. Avoid drafts during dry, hot weather to prevent materials from drying too rapidly.
- D. Provide continuous ventilation during installation, using as close to 100-percent outside air as possible.
- E. Protect workers and HVAC system from gypsum dust.
- F. Remove and replace gypsum board products that are exposed to water and display mold and mildew. Removal shall occur as soon as possible after exposure to water.

PART 2 - PRODUCTS

2.01 GYPSUM BOARD

- A. Regular Gypsum Board: USG "SHEETROCK Brand", CertainTeed Gypsum, Inc. "ProRoc" or approved equal with tapered edge to minimize ridging or beading and other joint imperfections.
 - 1. ASTM C1396, regular type.
 - 2. Thickness: 5/8-inch unless otherwise indicated or required to match existing.
- B. Fire-Rated Gypsum Board: USG "SHEETROCK Brand Type X", CertainTeed Gypsum, Inc. "ProRoc Type X" or approved equal with tapered edge to minimize ridging or beading and other joint imperfections.
 - 1. ASTM C1396, Type X fire-resistant type.
 - 2. Thickness: 5/8-inch.
 - 3. Provide USG "SHEETROCK Brand Firecode C", CertainTeed Gypsum, Inc. "ProRoc Type C" or approved equal solid set, fire-resistive core panels where required for fire-rated assemblies in Gypsum Association Fire Resistance Design Manual.
- C. Regular Mold- and Moisture-Resistant Gypsum Board: USG "SHEETROCK Brand Mold Tough", CertainTeed Gypsum, Inc. "ProRoc Moisture and Mold Resistant with M2TECH" or approved equal noncombustible, moisture- and mold-resistant gypsum core encased in moisture- and mold-resistant, 100-percent recycled face and back papers. Panels shall have a tapered long edge.
 - 1. ASTM C1396, regular type.
 - 2. Thickness: 5/8-inch unless otherwise indicated or required to match existing.
 - 3. Mold Resistance: Panel score of 10 when tested in accordance with ASTM D3273.
- D. Fire Rated Mold- and Moisture-Resistant Gypsum Board: USG "SHEETROCK Brand Mold Tough Type X", CertainTeed Gypsum, Inc. "ProRoc Moisture and Mold Resistant with M2TECH Type X" or approved equal noncombustible, moisture- and mold-resistant gypsum core encased in moisture- and mold-resistant, 100-percent recycled face and back papers. Panels shall have a tapered long edge.
 - 1. ASTM C1396, Type X fire-resistant type.
 - 2. Thickness: 5/8-inch.
 - 3. Mold Resistance: Panel Score of 10 when tested in accordance with ASTM D3273.
 - 4. Provide United States Gypsum "SHEETROCK Brand Mold Tough Firecode C" or approved equal solid set, fire-resistive core panels where required for fire-rated assemblies in Gypsum Association Fire Resistance Design Manual.

2.2 GYPSUM BOARD ACCESSORIES

- A. Screws: ASTM C954 or ASTM C1002.
 - 1. Use Type S screws for gypsum board attachment to light steel framing.
 - 2. Use Type S-12 screws for gypsum board attachment to 20-gauge and heavier steel framing.
 - 3. Use Type G screws for gypsum board attachment to gypsum board.
 - 4. Use Type W screws for gypsum board attachment to wood framing.
- B. Metal Trim: Galvanized steel, 26-gauge minimum; profiles and dimensions indicated.

1. Corner Beads: United States Gypsum "Dur-A-Bead" perforated metal wing type or approved equal.
 2. Casing Beads: United States Gypsum or approved equal muddable L and J shape trim.
- C. Joint-Treatment Materials: ASTM C475.
1. Drying type (ready mixed): United States Gypsum "SHEETROCK" all-purpose joint compound or approved equal.
 2. Setting-type (chemically hardening): United States Gypsum "SHEETROCK" setting-type joint compound or approved equal.
 3. Low-Dust Emission Type: United States Gypsum "SHEETROCK" Plus 3 ready-mixed lightweight all-purpose joint compound with dust control or approved equal.
 4. Use special setting type joint compound to treat joints and cut edges of moisture-resistant gypsum board.
- D. Reinforcing Joint Tape: ASTM C475, 2-inch nominal width. Provide fiberglass tape at moisture-resistant gypsum board.
- E. Primer/Surfacer: United States Gypsum "SHEETROCK" Tuff-Hide" primer-surfacer or approved equal.
- F. Texturing Material, if Required: USG "Sheetrock Brand Wall and Ceiling Spray Texture" or approved equal texture as required to match existing adjacent gypsum board finish.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that conditions are satisfactory for the installation of gypsum board and accessories.
1. Check framing for accurate spacing, alignment, plumbness, and levelness. Verify that both new and existing framing members will result in gypsum board surfaces complying with specified tolerances.
 2. Verify spacing of installed framing does not exceed maximum allowable for thickness of board to be used.
 3. Repair framing protrusions, twisted framing members, or unaligned members before installation of gypsum board commences.
- B. Do not commence the installation until unsatisfactory conditions have been corrected.

3.2 APPLICATION OF GYPSUM BOARD

- A. Apply materials in conformance with ASTM C840, the manufacturer's instructions, and as indicated.
- B. When gypsum board is to be applied to both walls and ceilings, apply to ceilings first.
- C. For partitions, apply full height sheets with long dimensions parallel to framing members with abutting edges over supports. Where ceiling heights exceed 10'-0" and where required by fire resistive ratings, apply sheets with long dimension perpendicular to framing members. For ceilings, apply sheets with long dimension either perpendicular or parallel to framing members to result in fewest joints. For fire-rated assemblies, apply gypsum board in accordance with CBC Chapter 7.
- D. Use sheets of maximum lengths to minimize end joints.
- E. Neatly fit and stagger end joints.
- F. Locate joints on different studs at opposite sides of partition.
- G. Cut and fit neatly around outlets and switches. Back-to-back wall penetrations shall be at least two stud spaces apart for acoustic isolation.
- H. Double-Layer Application:
1. Apply base layer with long dimension perpendicular to and centered on framing; apply face layer parallel to framing. Apply base layer parallel to framing where required by fire-resistive ratings.

2. Stagger sheets of each layer so that joints of each layer are 16-inches apart.
- I. Isolation of Gypsum Board from Other Construction:
1. Provide perimeter relief where gypsum board abuts structural decks, ceilings, vertical structural elements, or window sections.
 2. Finish gypsum board edge with corner bead.
 3. Seal space between casing bead and structure with continuous sealant bead.
 4. Seal around electrical boxes and conduit and pipe penetrations.
 5. Seal at base of gypsum board sheets.
- J. Installation of Fasteners:
1. Do not locate fasteners less than 3/8-inch from edges or ends of sheets. Do not locate fasteners less than one-inch from edges or ends in horizontal applications.
 2. Fire-Rated Partitions: Install fasteners in accordance with the more restrictive of either CBC Chapter 7 or the Underwriters' Laboratories assemblies as denoted on partition schedule.
 3. Non-Fire-Rated Partitions: Install fasteners in accordance with GA-216 and ASTM C840.
 4. Fire-Rated Ceilings: Install fasteners in accordance with CBC Chapter 7.
 5. Non-Fire-Rated Ceilings: Install fasteners spaced not more than 12-inches on center.
 6. Install screws using powered screw guns with adjustable screw-depth control head. Drive shank perpendicular to gypsum board surface. Do not hammer screws.
 7. Set fastener heads slightly below surface of gypsum board, but do not break or strip paper face around fastener.
 8. Stagger fasteners opposite each other on adjacent ends and edges.
 9. Omit fasteners at edges where metal edge trim will be installed.
- K. Installation of Accessories: Install corner trim at vertical and horizontal external corners and angles, and edge trim at junctions of gypsum board and other materials and at exposed edges.

3.3 TAPING AND FINISHING

- A. Finish Levels: Provide levels of gypsum board finish as required to match existing adjacent gypsum board finishes, in accordance with Gypsum Association GA 214 "Recommended Specification: Levels of Gypsum Board Finish".
- B. Interior Gypsum Board Finishing:
1. Taping (Level 1):
 - a. Use taping or all-purpose compound.
 - b. Butter taping compound into inside corners and joints.
 - c. Center tape over joints and press down into fresh compound.
 - d. Remove excess compound. Tape joints of gypsum board above suspended ceilings.
 2. First Coat (Level 2):
 - a. Use taping or all-purpose drying-type compound or setting-type joint compound.
 - b. Immediately after bedding tape, apply skim coat of compound over body of tape and allow to dry completely in accordance with manufacturer's instructions.
 - c. Apply first coat of compound over flanges of trim and accessories, and over exposed fastener heads and finish level with board surface.
 3. Second Coat (Level 3):
 - a. Use all-purpose or topping drying type joint compound.
 - b. After the first coat treatments is dried, apply second coat of compound over tape and trim, feathering compound 2-inches beyond edge of first coat.
 4. Third Coat (Level 4):
 - a. Use all-purpose or topping drying type joint compound.
 - b. After the second coat has dried, sand surface lightly and apply thin finish coat to joints, fasteners and trim, feathering compound 2-inches beyond edge of second coat.
 - c. Allow the third coat to dry. Apply additional compound, and touch-up and sand, to provide surface free of visual defects, tool marks, and ridges, ready for application of finish.
 5. Skim Coat (Level 5): Not used.
- C. Cut edges and openings around pipes and fixtures shall be caulked flush with sanitary sealant as specified in Section 07 92 00.

- D. In the completed installation, gypsum board shall have plumb and straight surfaces with no waves or buckles. Joints, fastener heads, and trim flanges shall be invisible after finishing. Surfaces shall be uniformly smooth and ready for painting or other decoration.
- E. Primer/Surfacer: Complete gypsum board surface to Level 4 before applying primer-surfacer. Machine-apply with airless sprayer in conformance with manufacturer's instructions to a wet film thickness of 15- to 20-mils. Allow to dry overnight before painting.
- F. Texture Finish: Provide texture finish if required to match adjacent gypsum board finish.
 - 1. Prepare and prime gypsum board surfaces in accordance with texture finish manufacturer's instructions.
 - 2. Mix and apply finish in accordance with manufacturer's instructions to produce a uniform texture without areas of thin application, matching approved sample.
 - 3. Remove texture droppings and overspray from door and window frames and other adjoining work.

3.4 PROTECTION OF FINISHED WORK

- A. Maintain temperature and humidity conditions as required to protect the installation.
- B. Protect completed gypsum board from damage or deterioration until final acceptance of the work.

END OF SECTION

SECTION 09 91 00 PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for painting and finishing interior and exterior exposed items and surfaces unless otherwise indicated or specified.
1. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatments specified in other Sections.
 2. Work includes sanding shop-primed surfaces and applying specified primer and finish coats.
 3. Work includes painting exposed pipes and ducts and exposed structural ceilings where a finished ceiling material is not installed.
 4. Work includes painting interior and exterior surfaces including gypsum board and Portland cement plaster.
 5. "Paint" means coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.
- B. Surfaces Not to Be Painted:
1. Pre-finished items, including but not limited to acoustic materials, casework, and finished mechanical and electrical equipment, including light fixtures, switchgear, and distribution cabinets.
 2. Concealed surfaces such as walls or ceilings in concealed areas and inaccessible areas, furred areas, pipe spaces, and duct shafts.
 3. Finished metal surfaces such as anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials unless otherwise indicated, exterior aluminum entrances, storefronts, and windows. Hot-dip galvanized, zinc/cadmium plating and other similar materials are not considered finished surfaces except as otherwise indicated or specified.
 4. Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor, and fan shafts.
- C. Following categories of work are included under other Sections:
1. Shop priming ferrous metal items including structural steel, metal fabrications, hollow metal work and similar items.
 2. Shop priming of fabricated components such as architectural woodwork, wood casework and shop-fabricated or factory-built mechanical and electrical equipment or accessories.
- D. Do not paint over code-required labels, equipment identification, performance rating, name, or nomenclature plates.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
1. Samples: Furnish samples of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate.
 - a. Provide stepped samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing samples for review. Resubmit until required sheen, color, and texture is achieved.
 - b. Furnish samples on the following substrates for review of color and texture only:
 - 1) Painted Wood: Two 12-inch square samples of each color and material on hardboard.
 - 2) Stained or Natural Wood: Two 4-inch x 8-inch samples of natural and stained wood finish on actual wood samples.
 2. Product Data: Specified paint systems are those of Benjamin Moore. If other paint manufacturers are proposed and accepted by the Architect, furnish product comparison charts showing that proposed paint systems are equal to the specified materials in number of coats, type of paint, and sheen.

- a. Furnish product data sheets on each color of paint used. Include manufacturer's color formula, pigment ratios, and indicate where paint was used.
- C. Information Submittals:
1. Certification: Furnish certification by the paint manufacturer that products supplied comply with local regulations controlling the use of volatile organic compounds (VOCs).

1.3 QUALITY ASSURANCE

- A. Comply with the more restrictive requirements of CalGreen Table 4.504.3 for residential projects or Table 5.504.4.3 for non-residential projects, or Section Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 3 regarding the quantity of volatile organic compounds (VOC) in Architectural Coatings.
- B. Applicators Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent.
- C. Single Source Responsibility: Provide primers and other undercoat paint produced by the same manufacturer as finish coats. Use thinners approved by paint manufacturer and use within recommended limits.
- D. Coordination of Work: Review other Sections in which prime paints are to be provided to ensure compatibility of coatings system for various substrates. Upon request, furnish information or characteristics of finish materials to be used.
- E. Field Samples and Mockups:
 1. On exterior wall surfaces provide full-coat finish samples on at least 100-sq. ft. of surface, as directed, until required sheen, color and texture is obtained; simulate finished lighting conditions for review of in-place work. Approved samples will be used as a standard for the Project.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name, batch number, color, and directions.
- C. Store materials in tightly covered containers. Maintain containers in a clean condition, free of foreign materials and residue.
- D. Keep the storage area neat and orderly. Remove oily rags and waste daily. Ensure that workers and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of paints.

1.5 JOB CONDITIONS

- A. Apply water-base paints when temperature of surfaces to be painted and surrounding air temperatures are between 50-deg. F. and 90-deg. F., unless otherwise permitted by paint manufacturer's printed instructions.
- B. Apply solvent-thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are between 45-deg. F. and 90-deg. F., unless otherwise permitted by paint manufacturer's printed instructions.
- C. Do not apply paint when the temperature is less than 5-deg. F. above dew point, or to damp or wet surfaces, unless otherwise permitted by paint manufacturer's printed instructions.
- D. Provide adequate ventilation during interior painting using as close to 100-percent outside air as possible.

1.6 EXTRA MATERIALS

- A. In addition to materials for completion of the work, furnish 5-gallons of additional materials for each type and color of opaque paint used.
- B. Furnish extra materials from same production lots or color runs used in the work. Furnish in containers factory sealed and labeled. Identify each container with Project name and type of material.
- C. Deliver materials and an inventory list just prior to Substantial Completion and store where directed by Owner's Representative.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. Benjamin Moore & Co. or approved equal.

2.2 MATERIALS

- A. Material Compatibility: Provide block fillers, primers, finish coat materials, and related materials that are compatible with one another and the substrates indicated under conditions of service and application.
- B. Material Quality: Provide best quality grade of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable. Each product within any one paint system shall be from the same manufacturer.

2.3 COLORS AND SHEENS

- A. Match existing or as directed by the Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions under which painting is to be applied. Surfaces receiving paint shall be thoroughly dry before paint is applied.
 - 1. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify Architect prior to applying barrier coats.
 - 2. Clean surfaces before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning.
 - 3. Start of painting will be construed as the applicator's acceptance of surfaces and conditions within a particular area.

3.2 PROTECTION

- A. Protection: Protect work of other Sections against damage by painting and finishing work. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
 - 1. Provide "Wet Paint" signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
 - 2. Remove or protect hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted or provide surface-applied protection prior to surface preparation and painting. Following completion of painting, reinstall removed items.
 - 3. At completion of work of other Sections, touch-up and restore damaged or defaced painted surfaces.

3.3 SURFACE PREPARATION

- A. Concrete and Masonry:
 - 1. Prepare surfaces to be painted by removing surface contaminants.
 - a. Remove efflorescence with stiff bristle brush, wire brushing, wiping, sandblasting or acid washing and rinsing. Allow to dry.

- b. Remove chalk, dust, dirt, asphalt, tar or excessive mortar by scraping or wire brushing.
 - c. Remove rust, grease or oil by solvent cleaning or sandblasting.
 - d. Treat concrete surfaces which are highly glazed or where traces of form release agents are present with a preparation of one-part concentrated muriatic acid, 4-parts water and one-part detergent or as recommended by parting compound manufacturer. Remove acid with water. Allow to dry.
 - e. Remove stains on concrete resulting from weathering or corroded metals, with a solution of 2-oz. sodium methasilicate in one-gallon water. Wet stained areas with water before application of solution. Allow to dry.
- B. Plaster:
- 1. Clean surfaces free from grit, loose plaster, and surface irregularities.
 - 2. Determine alkalinity and moisture content by performing appropriate tests. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's literature or where pH exceeds 10.
- C. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
- 1. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dry.
 - 2. Prime, stain, or seal wood to be painted immediately upon delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling.
 - 3. When transparent finish is required, back prime with spar varnish.
- D. Galvanized Metals:
- 1. Clean galvanized metal with appropriate metal prep and passivator removal.
 - 2. Perform the following test to ensure passivator removal:
 - a. With a 5-percent copper sulfate solution, place a swab or droplets on the prepared area. If the copper sulfate causes the galvanized coating to blacken, passivator has been removed and the surface is ready for paint application.
 - b. If the copper sulfate solution has no effect on the galvanized coating, continue with metal prep solution, prepared in accordance with SSPC-SP 16 "Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steel, and Non-Ferrous Metals" or use a scotch pad to abrade it, being careful not to remove the galvanizing.
 - 3. Document the process and successful passivator removal with photographs.
 - 4. Prepare weathered galvanized metals that have developed a layer of white rust by wire brushing or scrubbing with a stiff brush or abrasive pad to remove the white rust.
- E. Gypsum Board: Clean surfaces of dust, dirt, grease, oil and other foreign matter and dust clean.
- F. Existing Surfaces to be Repainted: Thoroughly clean and de-gloss surfaces to be repainted by sanding or other means prior to painting. Patched and bare areas shall be shop-primed with the same primer as specified for new work.

3.4 MATERIALS PREPARATION

- A. Mix and prepare painting materials in accordance with manufacturer's directions.
- B. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.
- C. Stir materials before application to produce a mixture of uniform density and stir as required during application. Do not stir surface film into material. Remove film and strain material before using.
- D. Use thinners approved by the paint manufacturer and only within recommended limits.
- E. Tinting: Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.5 APPLICATION

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
 - 1. Provide finish coats compatible with prime coats.
 - 2. The number of coats required is the same regardless of the application method. Do not apply following coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where required to produce a smooth even surface.
 - 3. Apply additional coats when undercoats, stains or other conditions show through final coat, until paint film is of uniform finish, color and appearance. Edges, corners, crevices, welds, and exposed fasteners shall receive a dry film thickness equivalent to that of flat surfaces.
- B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation.
 - 1. Allow sufficient time between successive coatings to permit proper drying.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's instructions.
 - 1. Brushes: Use brushes best suited for the material applied.
 - 2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
 - 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.
- D. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate.
- E. Prime Coats: Before applying finish coats, apply a prime coat. Re-coat primed and sealed surfaces where there is evidence of suction spots or unsealed areas to assure a finish coat with no burn-through or other defects.
- F. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness and other surface imperfections will not be acceptable.
- G. Transparent (Clear) Finishes: Use multiple coats to produce glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.
- H. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.6 CLEANING

- A. Clean-Up: During progress of work, remove discarded paint materials, rubbish, cans and rags at end of each workday.
- B. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by washing and scraping; do not scratch or damage finished surfaces.

3.7 EXTERIOR PAINT SCHEDULE

- A. Ferrous Metals, 100% Acrylic Semigloss:
 - 1. First Coat: Benjamin Moore Ultra Spec UP04.
 - 2. Second and Third Coats: Benjamin Moore Ultra Spec 449.
- B. Non-Ferrous Metals, 100% Acrylic Semigloss:
 - 1. Pretreatment: Etch.
 - 2. First Coat: Benjamin Moore Fresh Start Acrylic Primer 023.
 - 3. Second and Third Coats: Benjamin Moore Ultra Spec 449.
- C. Plaster, 100% Acrylic Flat:
 - 1. First Coat: Benjamin Moore Fresh Start Acrylic Primer N02.

2. Second and Third Coats: Benjamin Moore Ultra Spec N447.

3.8 INTERIOR PAINT SCHEDULE

- A. Wood Windows, 100% Acrylic Low Odor/Zero VOC Semigloss:
 1. First Coat: Benjamin Moore Fresh Start 0217.
 2. Second and Third Coats: Benjamin Moore Ultra Spec N539.
- B. Wood Windows, 100% Acrylic Low Odor/Zero VOC Low Sheen/Eggshell:
 1. First Coat: Benjamin Moore Fresh Start 0217.
 2. Second and Third Coats: Benjamin Moore Ultra Spec N538.
- C. Wood Windows, Clear Satin Urethane Finish:
 1. First Coat: Lenmar Sealer 1PR.100.
 2. Second and Third Coats: Lenmar Aqua Plastic 1WB.1427.
- D. Wood Windows, Stain and Satin Urethane Finish:
 1. First Coat: Lenmar 1 WB Wiping Stain.
 2. Second Coat: Lenmar Sealer 1PR.100.
 3. Third and Fourth Coats: Lenmar Aqua Plastic 1WB.1427.
- E. Gypsum Board, 100% Acrylic Low Odor/Zero VOC Flat:
 1. First Coat: Benjamin Moore Ultra Spec N534.
 2. Second and Third Coats: Benjamin Ultra Spec N536.
- F. Gypsum Board, 100% Acrylic Low Odor/Zero VOC Low Sheen/Eggshell:
 1. First Coat: Benjamin Moore Ultra Spec N534.
 2. Second and Third Coats: Benjamin Moore Ultra Spec N538.
- G. Gypsum Board, 100% Acrylic Low Odor/Zero VOC Semigloss:
 1. First Coat: Benjamin Moore Ultra Spec N534.
 2. Second and Third Coats: Benjamin Moore Ultra Spec N540.

END OF SECTION

SECTION 10 14 00 SIGNAGE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing the following types of code required signs:
1. Accessibility entrance signs.
 2. No smoking sign.
 3. Room signage.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
1. Product Data: Manufacturer's construction details relating to materials, dimensions of individual components, profiles, and finishes for each type of sign required.
 2. Shop Drawings: Furnish shop drawings for fabrication and erection of signs. Include plans, elevations, and large-scale sections of typical members and other components. Show anchors, grounds, reinforcement, accessories, layout, and installation details.
 3. Samples: Furnish samples of each exposed material, including letters and other graphics, showing finish, color, and qualities of fabrication and design.

1.3 QUALITY ASSURANCE

- A. Comply with California Building Code (CBC) Section 11B-703.

PART 2 - PRODUCTS

2.1 MATERIALS AND FABRICATION

- A. Acrylic Sheet: Transparent, clear, semi-matte or non-glare, thickness specified.
- B. Aluminum Sheet: Alloy and temper recommended by the aluminum producer or finisher for the type of use and finish indicated and specified.
- C. Aluminum Extrusions: Alloy and temper recommended by the aluminum producer or finisher for the type of use and finish indicated and specified.
- D. Cast Aluminum: Aluminum Association Alloy C443.2.
- E. Stainless Steel Plate, Sheet, and Strip: Provide stainless steel plate, sheet, or strip, AISI Type 302, complying with ASTM A167.
- F. Colored Coatings for Acrylic Plastic Sheet: Use colored coatings, including inks and paints for copy and background colors that are recommended by acrylic manufacturer for optimum adherence to acrylic surface and are non-fading for the application intended.

2.3 SIGN SUMMARY

- A. Entrance Signs:
1. Building entrances that are accessible to and useable by physically disabled persons shall be identified with at least one standard accessibility symbol sign and with additional directional signs as required, to be visible to persons along approaching pedestrian ways.
 2. Comply with CBC Section 11B-216.6.
- B. No Smoking Signs:
1. Provide no smoking within 30-feet of building sign. Material and colors as indicated or as selected by the Architect.

- C. Room Signs:
1. Provide one sign adjacent to the latch side of doors or on the nearest adjacent wall where indicated. Signs shall identify room name as directed by the Architect.
 2. Provide signs with raised upper case letters with Grade 2 Braille. Comply with ADA Article 4.30.
 3. Mount signs 60-inches above the finish floor to the centerline of sign.
 4. Comply with CBC Section 11B-703.4.2.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate where indicated and as required by applicable codes and secure with specified fasteners.
- B. Install level, plumb and at height indicated or required, with surfaces free from distortion or other appearance defects.

3.2 CLEANING AND PROTECTION

- A. At completion of installation, clean soiled surfaces in accordance with manufacturer's instructions. Protect units from damage until final acceptance.

END OF SECTION

SECTION 12 21 23 WINDOW SHADES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section includes the following:
 - 1. Manually operated sunscreen roller shades.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Furnish for each type of window shade specified, including installation and maintenance instructions.
 - 2. Shop drawings showing location and extent of window shades, including anchorage details. Show relationship to adjoining work, and operational clearances.
 - 3. Samples for verification purposes of each type of window shade fabric in sets for each color specified, showing full range of variations expected in these characteristics. Prepare samples from same material to be used for the Work.
 - a. Window Shade Fabric: 12-inch-square samples of each type showing full color range and degree of openness.
- C. Information Submittals:
 - 1. Window shade maintenance data, precautions regarding cleaning materials and methods, and instructions for operating hardware and controls.
- D. Closeout Submittals:
 - 1. Warranty.

1.3 QUALITY ASSURANCE

- A. Single-Source Responsibility: Obtain window shades from one source of a single manufacturer.
- B. Installer: Minimum 10 years' experience in the installation of roll-down blinds comparable to those specified in this Section.
- C. Fire-Test-Response Characteristics: Passes NFPA 701 small- and large-scale vertical burn. Materials tested shall be identical to products proposed for use.
- D. Anti-Microbial Characteristics: "No Growth" per ASTM G21 results for fungi ATCC 9642, ATCC 9644, ATCC 9645.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Deliver shades in factory-labeled packages, marked with manufacturer and product name, fire-test-response characteristics, and location of installation using same room designations indicated.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Check openings by field measurements before fabrication; show recorded measurements on shop drawings.
- B. Install roll-down blinds after finish work including painting is complete and ambient temperature and humidity conditions are maintained at the occupied levels.

1.6 WARRANTY

- A. Roll-Down Blind Hardware, Chain and Shade cloth: Warrant against defective materials and workmanship for a period of 25-years from date of Substantial Completion.
- B. This warranty shall be in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. MechoShade Systems, Inc. "Mecho 5" or approved equal.

2.2 SHADE CLOTH

- A. Sunscreen Shade Cloth: MechoShade Systems, Inc. "EcoVeil 1350 Series" and "EcoVeil 1750 Series" or approved equal Cradle to Cradle Certified, fabricated from 100-percent thermoplastic olefin (TPO), NFPA 701 Fire Classification, .034-inch thick.
 - 1. Weave: 5-percent and 1-percent open.
 - 2. Color: As selected by the Architect from manufacturer's standard selections.

2.3 SHADE BAND

- A. Shade Bands: Construction of shade band includes the fabric, the hem weight, hem-pocket, shade roller tube, and the attachment of the shade band to the roller tube. Sewn hems and open hem pockets are not acceptable.
 - 1. Hem Pockets and Hem Weights: Fabric hem pocket with RF-welded seams (including welded ends) and concealed hem weights. Hem weights shall be of appropriate size and weight for shade band. Hem weight shall be continuous inside a sealed hem pocket. Hem pocket construction and hem weights shall be similar, for all shades within one room.
 - 2. Shade Band and Shade Roller Attachment:
 - a. Use extruded aluminum shade roller tube of a diameter and wall thickness required to support shade fabric without excessive deflection.
 - b. Provide for positive mechanical engagement with drive / brake mechanism.
 - c. Provide for positive mechanical attachment of shade band to roller tube; shade band shall be made removable / replaceable with a "snap-on" snap-off" spline mounting, without having to remove shade roller from shade brackets.
 - d. Mounting spline shall not require use of adhesives, adhesive tapes, staples, and/or rivets.

2.4 SHADE FABRICATION

- A. Fabricate units to completely fill existing openings from head to sill and jamb-to-jamb, unless specifically indicated otherwise.

- B. Fabricate shade cloth to hang flat without buckling or distortion. Fabricate with heat-sealed trimmed edges to hang straight without curling or raveling. Fabricate unguided shade cloth to roll true and straight without shifting sideways more than 1/8-inch in either direction per 8-feet of shade height due to warp distortion or weave design. Fabricate hem with either bottom hem weights or hem tubes.
- C. Provide battens in standard shades as required to assure proper tracking and uniform rolling of the shade bands. The shade width-to-height (W:H) ratios shall not exceed manufacturer's standards. Battens shall be roll-formed stainless steel or tempered steel, as required.
- D. For railroaded shade bands, provide seams in railroaded multi-width shade bands as required to meet size requirements and in accordance with seam alignment as acceptable to Architect. Seams shall be properly located. Furnish battens in place of plain seams when the width, height, or weight of the shade exceeds manufacturer's standards.
- E. Provide battens for railroaded shades when width-to-height (W:H) ratios meet or exceed manufacturer's standards.

2.5 MANUAL SHADE COMPONENTS

- A. Access and Material Requirements:
 - 1. Provide shade hardware allowing for the removal of shade roller tube from brackets without removing hardware from opening and without requiring end or center supports to be removed.
 - 2. Provide shade hardware that allows for removal and re-mounting of the shade bands without having to remove the shade tube, drive, or operating support brackets.
 - 3. Use only Delrin engineered plastics for plastic components of shade hardware.
- B. Manual Operated Chain Drive Hardware and Brackets:
 - 1. Provide universal, regular, and offset drive capacity, allowing drive chain to fall at front, rear or non-offset for shade drive end brackets. Universal offset shall be adjustable for future change.
 - 2. Provide hardware capable of installation of a removable fascia, for both regular and/or reverse roll, which shall be installed without exposed fastening devices of any kind.
 - 3. Provide shade hardware system that allows for removable regular and/or reverse roll fascias to be mounted continuously across two or more shade bands without requiring exposed fasteners of any kind.
 - 3. Provide shade hardware system that allows for the operation of multiple shade bands (multi-banded shades) by a single chain operator. Connectors shall be offset to assure alignment from the first to the last shade band.
 - 4. Provide shade hardware system that allows multi-banded manually operated shades to be capable of smooth operation when the axis is offset a maximum of 6-degrees on each side of the plane perpendicular to the radial line of the curve, for a 12-degrees total offset.
 - 5. Provide positive mechanical engagement of drive mechanism to shade roller tube.
 - 6. Provide shade hardware constructed of minimum 1/8-inch-thick plated steel or heavier as required to support 150-percent of the full weight of each shade.
 - 7. Drive Bracket / Brake Assembly:
 - a. The Drive Bracket shall be fully integrated with all accessories.
 - b. Drive sprocket and brake assembly shall rotate and be supported on a welded 3/8-inch steel pin.
 - c. The brake shall be an over-running clutch design which disengages to 90-percent during the raising and lowering of a shade. The brake shall withstand a pull force of 50-lbs. in the stopped position.

- d. The braking mechanism shall be applied to an oil-impregnated hub on which the brake system is mounted. The oil impregnated hub design includes an articulated brake assembly, which assures a smooth, non-jerky operation in raising and lowering the shades. The assembly shall be permanently lubricated.
 - e. The entire assembly shall be fully mounted on the steel support bracket, and fully independent of the shade tube assembly, which may be removed and reinstalled without effecting the roller shade limit adjustments.
- C. Drive Chain: #10 qualified stainless-steel chain rated to 90-lb. minimum breaking strength. Nickel plate chain shall not be accepted.

2.6 ACCESSORIES

- A. Fascia:
- 1. Continuous removable extruded aluminum fascia that attaches to shade mounting brackets without the use of adhesives, magnetic strips, or exposed fasteners.
 - 2. Fascia shall be able to be installed across two or more shade bands in one piece.
 - 3. Fascia shall fully conceal brackets, shade roller and fabric on the tube.
 - 4. Provide bracket / fascia end caps where mounting conditions expose outside of roller shade brackets.
 - 5. Finish as selected by the Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings where window shades are to be installed for suitable conditions.
- B. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by the blind manufacturer.

3.3 INSTALLATION

- A. Install window shades according to the manufacturer's instructions. Install plumb and level, and at the proper height and location to adjoining window units. Securely anchor with clips, brackets, and anchors suited to the type of mounting indicated.
- B. Isolate metal parts of window shades from concrete or mortar to prevent galvanic action. Use tape, thick coating, or another method, as recommended by the manufacturers.

3.4 ADJUSTING

- A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.5 CLEANING

- A. Remove and dispose of debris, cartons, and other materials used in the installation.

3.6 PROTECTION

- A. Protect installed units to ensure optimum operating conditions without damage at completion of the Project. Repair or replace damaged or malfunctioning units.

END OF SECTION

SECTION 14 42 13 VERTICAL PLATFORM LIFTS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section includes an enclosed, self-contained vertical platform lift.
- B. Related Sections:
 - 1. Electrical is specified in Division 26.

1.2 SUBMITTALS

- A. General: Comply with the requirements specified in Division 01.
- B. Action Submittals:
 - 1. Product Data: Manufacturer's data sheets on each product to be used, including:
 - a. Submit manufacturer's installation instructions, including preparation, storage and handling requirements.
 - b. Include complete description of performance and operating characteristics.
 - c. Show maximum and average power demands.
 - 2. Shop Drawings:
 - a. Show typical details of assembly, erection and anchorage.
 - b. Include wiring diagrams for power, control, and signal systems.
 - c. Show complete layout and location of equipment, including required clearances and coordination with shaftway.
 - 3. Selection Samples: For each finished product specified, provide two complete sets of color chips representing the manufacturer's full range of available colors and patterns.
 - 4. Verification Samples: For each finished product specified, two samples, minimum size 1-3/4" x 2-1/4" inches, representing actual product, color, and patterns.
- C. Closeout Submittals:
 - 1. Warranty.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm with a minimum of 10 years' experience in manufacturing vertical platform lifts, with evidence of experience with similar installations of type specified.
- B. Installer Qualifications: Licensed to install equipment of this scope, with evidence of experience with specified equipment. Installer shall maintain an adequate stock of replacement parts, have qualified people available to ensure fulfillment of maintenance and callback service without unreasonable loss of time in reaching project site.

1.4 REGULATORY REQUIREMENTS

- A. Provide platform lifts in compliance with:
 - 1. ASME A18.1 - Safety Standard for Platform Lifts and Stairway Chairlifts.
 - 2. ASME A17.1 - Safety Code for Elevators and Escalators.
 - 3. ASME A17.5 - Elevator and Escalator Electrical Equipment.
 - 4. NFPA 70 - National Electric Code.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with the requirements specified in Division 01.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store components off the ground in a dry covered area, protected from adverse weather conditions.

1.6 PROJECT CONDITIONS

- A. Do not use platform lifts for hoisting materials or personnel during construction period.

1.7 WARRANTY

- A. Warranty: Manufacturer shall warrant the platform lift materials and factory workmanship for two years following completion of installation.
- B. Extended Warranty: Provide an extended manufacturer's warranty for the entire warranty period covering the platform lift materials and factory workmanship for a period of 5-years beyond the initial two-year warranty. Preventive Maintenance agreement required.

PART 2 - PRODUCTS**2.1 APPROVED MANUFACTURERS**

- A. Garaventa Lift "Genesis Opal" or approved equal.

2.2 UNENCLOSED VERTICAL PLATFORM LIFT

- A. Capacity: 750-lbs rated capacity.
- B. Mast Height: Manufacturer's standard for required lifting height.
- C. Nominal Clear Platform Dimensions:
 - 1. Standard: 36-inches by 48-7/8-inches.
- D. Platform Configuration: Straight-Through.
- E. Landing Openings: As indicated.
- F. Doors and Gates: Doors and gates shall be self closing type.
 - 1. Lower and Upper Gate Height: Flush mount, 42-1/8-inches.
 - 2. Gate Construction: Aluminum frame with:
 - a. Panels of 16-gauge painted galvanized steel.
 - b. D-Handle Pull: 12-inch offset D-Handle.
 - 3. Power Door/Gate Operator: Automatically opens the door/gate when platform arrives at a landing. Will also open at landing by pressing call button.
 - a. ADA Compliant and obstruction sensitive.
 - b. Low voltage, 24 VDC with all wiring concealed.
- G. Lift Components:
 - 1. Machine Tower: Custom aluminum extrusion.
 - 2. Base Frame: Structural steel.
 - 3. Platform Side Wall Panels: 42-1/8-inches high. 16-gauge galvanized steel sheet. Custom aluminum extrusion tubing frame.

4. Enclosure Panels: 16-gauge painted galvanized steel sheet.,
- H. Mast Height Above Upper landing: As indicated.
- I. Infill Panel Kit: Provide 16-gauge galvanized panels and mounting hardware to cover void between side of enclosure, drive mast and adjacent wall.
- J. Base Mounting and Access to Lift at Lower Landing:
1. Floor Mount: Base of lift shall be mounted on the slab surface of the lower landing. For access onto the platform provide a folding ramp of 16-gauge galvanized steel sheet with a slip resistant surface.
- K. Hydraulic Drive:
1. Drive Type: Chain hydraulic.
 2. Emergency Operation: Manual device to lower platform and use auxiliary battery power to raise or lower platform.
 3. Safety Devices:
 - a. Slack chain safety device.
 - b. Shoring device.
 4. Travel Speed: 17-fpm.
 5. Motor: 3.0-hp; 24-volts DC.
 6. Power Supply: As indicated on the Electrical Drawings.
 - a. Powered by building continuous mains converted to 24 VDC and equipped with auxiliary battery backup power system capable of running lift up and down for a minimum of 5 trips with rated load. Required for high use lifts and lifts equipped with a fan and ventilation system.
- L. Platform Controls: 24 VDC control circuit with the following features.
1. Direction Control: Constant pressure rocker switch.
 2. Illuminated and audible emergency stop switch shuts off power to lift and activates audio alarm equipped with battery backup.
 3. Keyless operation.
- M. Call Station Controls: 24 VDC control circuit with the following features.
1. Direction Control: Constant pressure rocker switch.
 2. Keyless operation.
 3. Call Station Mounting: Wall-mounted, surface or recessed as indicated.
- N. Safety Devices and Features:
1. Grounded electrical system with upper, lower, and final limit switches.
 2. Tamper resistant interlock to electrically monitor that the door is in the closed position and the lock is engaged before lift can move from landing.
 3. Electrical disconnect shall shut off power to the lift.
- O. Finishes
1. Aluminum Extrusions: Champagne anodized finish.
 2. Ferrous Components: Electrostatically applied baked powder finish, fine textured.
 - a. Color: Satin Grey, RAL 7030.
 3. Lift Finish: Baked powder coat finish, color as selected by the Architect from manufacturers optional RAL color chart.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify shaft and machine space are of the correct size and within tolerances.
- C. Verify required landings and openings are of the correct size and within tolerances.
- D. Verify electrical rough-in is at the correct location.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install platform lifts in accordance with applicable regulatory requirements including ASME A 17.1, ASME A 18.1 and the manufacturer's instructions.
- B. Install system components and connect to building utilities.
- C. Accommodate equipment in space indicated.
- D. Startup equipment in accordance with manufacturer's instructions.
- E. Adjust for smooth operation.

3.4 FIELD QUALITY CONTROL

- A. Perform tests in compliance with ASME A 17.1 or A18.1 and as required by authorities having jurisdiction.
- B. Schedule tests with agencies and Architect, Owner, and Contractor present.

3.5 PROTECTION

- A. Protect installed products until completion of the Project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 26 00 00 BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Electrical systems required for this work includes labor, materials, equipment, and services necessary to complete installation of electrical work shown on Drawings, specified herein or required for a complete operable facility and not specifically described in other Sections of these Specifications. Among the items required are:
 - 1. Distribution equipment shown on Drawings.
 - 2. Feeders distribution panels, and other equipment as detailed.
 - 3. Branch circuit wiring from the distribution panels for receptacles.
- B. Fees:
 - 1. Obtain and pay for electrical permits, plan review, and inspections from local Authority Having Jurisdiction (AHJ).

1.2 DEFINITIONS

- A. Following is a list of abbreviations generally used in this Division:
 - 1. ADA Americans With Disabilities Act.
 - 2. CBC California Building Code.
 - 3. CEC California Electrical Code.
 - 4. CFC California Fire Code.
 - 5. CECT24 California Energy Code Title 24.
 - 6. HVAC Heating, Ventilating and Air Conditioning.
 - 7. IEEE Institute of Electrical and Electronics Engineers.
 - 8. IES Illuminating Engineering Society
 - 9. NEMA National Electrical Manufacturers Association.
 - 10. NFPA National Fire Protection Association.
 - 11. OSHA Occupational Safety and Health Administration.
 - 12. UL Underwriters Laboratories Inc.
- B. Provide: To furnish and install, complete and ready for the intended use.
- C. Furnish: Supply and deliver to the project site, ready for unpacking, assembly and installation.
- D. Install: Includes unloading, unpacking, assembling, erecting, installation, applying, finishing, protecting, cleaning and similar operations at the project site as required to complete items of work furnished by others.

1.3 SUBMITTALS

- A. Operation and Maintenance Documentation: Provide copies of certificates of code authority acceptance, test data, product data, guarantees, warranties, and the like.
- B. Shop Drawings: Provide shop drawings which include physical characteristics, electrical characteristics, device layout plans, wiring diagrams, and the like. Provide product submittals and shop drawings in either paper format or electronic format. Electronic format must be submitted via email or ftp site. For paper hardcopy, provide one complete binder with tabbed dividers containing a separate submittal for each specifications section. For electronic format, provide one zip file per specification division containing a separate file for each specifications section. Individual submittals sent piecemeal in a per Specification Section method will be returned without review or comment. Copy Architect on all submissions.
 - 1. Identify each submittal in detail. Note what differences, if any, exist between the submitted item and the specified item. Failure to identify the differences will be considered cause for disapproval. If differences are not identified and/or not discovered during the submittal review process, Contractor remains responsible for providing equipment and materials that meet the specifications and drawings.

2. Provide samples of NFPA 70E compliant arc flash hazard labeling for electrical equipment.
 3. Maximum of two reviews of complete submittal package. Arrange for additional reviews and/or early review of long-lead items; Bear costs of these additional reviews at Engineer's hourly rates. Incomplete submittal packages/submittals will be returned to contractor without review.
- C. Record Drawings: Show changes and deviations from the Drawings. Include written Addendum and change order items. Make changes to Drawings in a neat, clean, and legible manner.

1.4 QUALITY ASSURANCE

- A. Conform to the latest adopted version of the California Electric Code (CEC), with local amendments.
- B. Furnish products listed by Underwriters Laboratories Inc. (UL) or other testing firm acceptable to AHJ.

1.5 SEQUENCING AND SCHEDULING

- A. For the proper execution of the work, cooperate with other crafts and contracts as needed.
- B. To avoid installation conflicts, thoroughly examine the complete set of Contract Documents. Resolve conflicts prior to installation.
- C. Prior to installation of feeders to equipment requiring electrical connections, examine the manufacturer's shop drawings, wiring diagrams, product data, and installation instructions. Verify that the electrical characteristics detailed in the Contract Documents are consistent with the electrical characteristics of the actual equipment being installed.

1.6 WARRANTY

- A. Guarantee electrical work against faulty material or workmanship for a period of one year from the date of final completion by the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Base contract upon furnishing materials as specified. Materials, equipment, and fixtures used for construction are to be new, latest products as listed in manufacturer's printed catalog data and are to be UL approved or have adequate approval or be acceptable by state, county, and city authorities. Equipment/fixture supplier is responsible for obtaining State, County, and City acceptance on equipment/fixture not UL approved or not listed for installation.
- B. Include special features, finishes, accessories, and other requirements as described in the Contract Documents regardless of the item's listed catalog number.
- C. Provide incidentals not specifically mentioned herein or noted on Drawings, but needed to complete the system or systems, in a safe and satisfactory working condition.
- D. Firestopping Foam Sealant: Foam sealant for use around conduit penetrations to prevent passage of smoke, fire, toxic gas or water. Maintain seal before, during and after fire. In and around conduit for thermal break at penetration of barrier between heated and unheated spaces. Hilti, 3M, Chase Technology Corporation CTC PR-855, Fire Foam, Thomas & Betts, or approved equivalent.

2.2 RACEWAYS

- A. Electrical Metallic Tubing (EMT): Steel galvanized tubing. Manufactured in conformance with UL 797, ANSI C80.3. Manufacturers: Allied Tube & Conduit, Beck Manufacturing WL, Picoma, or approved equivalent.
- B. Flexible Metal Conduit (FMC): Interlocked steel construction. Manufactured in conformance with UL 1. Manufacturers: AFC Cable Systems Inc., Electri-Flex Company, International Metal Hose, or approved equivalent.
- C. Conduit Fittings:
 1. Bushings: Insulated type for threaded rigid, conduit or raceway connectors without factory installed plastic throat conductor protection. Manufacturers: Thomas & Betts 1222 Series, O-Z Gedney B Series, or approved equivalent.

2. Ground Bushings: Insulated grounding type for threaded rigid, conduit or raceway connectors. Manufacturers: O-Z Gedney BLG Series or approved equivalent.
3. Raceway Connectors and EMT Couplings:
 - a. Steel connectors, couplings, and conduit bodies with zinc electroplate.
 - b. Connector locknuts are zinc electroplated steel, with threads meeting ASTM tolerances.
 - c. Connector throats have factory installed plastic inserts permanently installed. For normal cable or conductor exiting angles from raceway, the cable jacket or conductor insulation bears only on plastic throat insert.
4. Expansion/Deflection Fittings:
 - a. EMT: Use O-Z Gedney Type TX, or approved equivalent.
 - b. RMC: Use O-Z Gedney Type AX, DX and AXDX, or approved equivalent.

2.3 WIRES AND CABLES

- A. Copper, 600 volt rated throughout. Conductors 14AWG to 10AWG, solid. Conductors 8AWG and larger, stranded. Phase color to be consistent at feeder terminations; A-B-C, top to bottom, left to right, front to back. Conductors 3AWG and larger, minimum insulation rating of 75C. Insulation types THWN, THHN or XHHW. Minimum insulation rating of 90C for branch circuits. Manufacturers: Carol, General Cable, Okonite, Southwire, or approved equivalent.
- B. MC Cable: High strength galvanized steel or aluminum flexible armor. Full length minimum size No. 12 copper ground wire, THHN 90C conductors, full length tape marker. Overall PVC or nylon cable tape. Short circuit throat insulators. Connector throats have field installed plastic inserts permanently installed. For normal cable or conductor exiting angles from the raceway (CEC bending radius), the cable jacket or conductor insulation bears only on the plastic throat insert. Manufacturers: Alfex, AFC, Carol, or approved equivalent. AC/MC cable allowed only for 20 amp branch circuits concealed in walls or ceiling.

2.4 CONNECTORS

- A. Copper Pads: Drilled and tapped for multiple conductor terminals.
- B. Lugs: Compression type for use with stranded branch circuit or control conductors; mechanical lugs not acceptable. Manufacturers: Anderson, IlSCO, Panduit, Thomas & Betts, 3M, or approved equivalent.
- C. Conductor Branch Circuits: Wire nuts with integral spring connectors for conductors 18 through 8AWG. Push-in type connectors where conductors are not required to be twisted together are not acceptable. Manufacturers: 3M, Ideal, or approved equivalent.

2.5 BOXES

- A. Device Outlet: Installation of one or two devices at common location, minimum 4-inch square, minimum 1-1/2 inches deep. Single- or two-gang flush device raised covers. Manufacturer: Hubbell, Thomas & Betts, or approved equivalent.
- B. Construction: For interior locations, provide galvanized steel outlet wiring boxes, of the type, shape and size, including depth of box, to suit each respective location and installation; constructed with stamped knockouts in back and sides, and with threaded holes with screws for securing box covers or wiring devices. Provide outlet box accessories for each installation, including mounting brackets, wallboard hangers, extension rings, cable clamps and metal straps for supporting outlet boxes, compatible with outlet boxes being used and meeting requirements of individual wiring situations.
- C. Junction and Pull Boxes: ANSI 49 gray enamel painted sheet steel junction and pull boxes, with screw-on covers; of the type shape and size, to suit each respective location and installation; with welded seams and equipped with steel nuts, bolts, screws and washers. Install junction boxes above accessible ceilings for drops into walls for receptacle outlets from overhead. Install junction boxes and pull boxes to facilitate the installation of conductors and limiting the accumulated angular sum of bends between boxes, cabinets and appliances to 270 degrees. Manufacturer: B-Line, Hoffman, or approved equivalent.

- D. Box extension adapter: Install over flush wall outlet boxes to permit flexible raceway extension from flush outlet to fixed or movable equipment. Manufacturer: Bell 940 Series, **Red Dot IHE4 Series, or approved equivalent.**

2.6 WIRING DEVICES

- A. Finish: Match building standard
- B. Receptacles: Straight parallel blade, 125 volt, 2 pole, 3 wire grounding.
 - 1. Industrial Grade: Back and side wired. Single piece, rivetless. Brass grounding strap and back-wired ground screw. 20-amp. Cooper 5362, Hubbell HBL5362, Leviton 5362, Pass & Seymour 5362A.
- C. Finish Plates: Match building standard

2.7 SAFETY DISCONNECTS

- A. Toggle Type Disconnect Switches: 120 volt, 1-pole, 20 amp, 1 HP maximum. NEMA 1 enclosure for indoors, NEMA 3R enclosure for outdoors.
- B. Safety Switches: Heavy duty, fusible and non-fusible type (as indicated on drawings), dual rated, quick-make, quick-break with fuse rejection feature for use with Class R fuses only. Device labeled with maximum voltage, current, and horsepower. Operable handle interlocked to prevent opening front cover with switch in "on" position and lockable in "off" position. Switches rated for maximum available fault current. Provide NEMA 1 enclosure for indoors, NEMA 3R enclosure for outdoors. Manufacturers: Eaton, General Electric, Square D, Siemens, or approved equivalent.

2.8 SUPPORTING DEVICES

- A. Hangers, Supports, Threaded Rod and Fasteners: Corrosion-resistant materials of size and type adequate to carry the loads of equipment and conduit, including weight of wire in conduit. Manufacturers: B-Line, Kindorf, Superstrut, Unistrut, or approved equivalent.
- B. Anchors: Corrosion-resistant materials of size and type adequate to carry the loads of equipment and conduit, including weight of wire in conduit. Manufacturers: Anchor It, Epcon System, Hilti-Hit System, Power Fast System, or approved equivalent.
- C. Pipe Straps: Two-hole galvanized or malleable iron.

2.9 ELECTRICAL IDENTIFICATION

- A. Nameplates: Engraving stock melamine or lamicaid plastic laminate, Federal Specification L-P-387, in the size and thicknesses indicated, engraved with engraver's standard letter style, minimum 1/2-inch high letters, black with white core (letter color), punched for mechanical fastening except where adhesive mounting is necessary because of substrate. Provide 1/8-inch thick material. Use self tapping stainless steel screws. Manufacturer: B&I Nameplates, Intellicum, JBR Associates, or approved equivalent.
- B. Labels: Adhesive tape with 18 point black letters on clear background. Use only for identification of individual wall switches and receptacles, control stations, and telecommunication outlets. Indicate device name, source panel, and source circuits. Do not provide dymo tape style labels. Manufacturer: Kroy, Brady, or approved equivalent.
- C. Conductor Numbers: Vinyl-cloth self-adhesive type wire markers. Each conductor at pullboxes, panelboards, outlet boxes, junction boxes, and each load connection. Branch circuit or feeder numbers as indicated on drawings and source panel. Manufacturer: Brady, Panduit, Sumitomo, or approved equivalent.
- D. Branch Circuit Schedules: Provide branch circuit identification schedules, typewritten, clearly filled out, to identify load connected to each circuit and location of load. Numbers to correspond to numbers assigned to each circuit breaker pole position.
- E. Circuit Breaker Identification: Provide permanent identification number in or on panelboard dead-front adjacent to each circuit breaker pole position. Horizontal centerline of engraved numbers to correspond with centerline of circuit breaker pole position.

2.10 GROUNDING MATERIALS

- A. Grounding Electrode Conductor: Soft-draw bare stranded conductor for wire sizes larger than #10 AWG Bare. Solid copper for wire sizes #10 AWG and smaller.
- B. Equipment Grounding Conductor: Green insulated, insulation type to match that of associated feeder or branch circuit wiring, size as indicated on drawings.

2.11 OVERCURRENT PROTECTIVE DEVICES

- A. Molded Case Circuit Breakers:
 - 1. One, two or three-pole bolt on, single handle common trip, as indicated on Drawings.
 - 2. Overcenter toggle-type mechanism, quick-make, quick-break action. Trip indication is by handle position.
 - 3. Calibrate for operation in 40C ambient temperature.
 - 4. 15 to 150 Amp Breakers: Permanent trip unit containing individual thermal and magnetic trip elements in each pole.
 - 5. Provide handle mechanisms that are lockable in the open (off) position.
 - 6. Manufacturers: Eaton Electrical, General Electric, Siemens, Square D, or approved equivalent.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Drawings are diagrammatic with symbols representing electrical equipment, outlets, luminaires, and wiring. Examine the entire set of Drawings to avoid conflicts with other systems. Determine exact route and installation of electrical wiring and equipment with conditions of construction.
- B. Clarification:
 - 1. The Drawings govern in matters of quantity, the Specification in matters of quality. In event of conflict on Drawings or in the Specifications, the greater quantity and the higher quality apply.
 - 2. Should the Electrical Documents indicate a condition conflicting with the governing codes and regulations, refrain from installing that portion of the work until clarified by Architect.

3.2 CONTINUITY OF SERVICE

- A. No interruption of services to any part of existing facilities will be permitted without express permission in each instance from the Owner. Requests for outages shall state the specific dates and hours and the maximum durations, with the outages kept to these specific dates and hours and the maximum durations. Obtain written permission from the Owner for any interruption of power, lighting or signal circuits and systems.

3.3 INSTALLATION

- A. Install electrical equipment complete as directed by manufacturer's installation instructions. Obtain installation instructions from manufacturer prior to rough-in of the electrical equipment, examine the instructions thoroughly. When requirements of installation instructions conflict with Contract Documents, request clarification from Architect prior to proceeding with installation. This includes proper installation methods, sequencing, and coordination with other trades and disciplines.
- B. Delivery, storage and handling: Inspect and report concealed damage to carrier within their required time period. Store in a clean, dry environment. Maintain factory packaging, and if required, provide an additional heavy canvas or heavy plastic cover to protect enclosure(s) from dirt, water, construction debris, and traffic.
- C. Install equipment requiring access (i.e. Junction boxes, luminaires, power supplies, motors, etc.) so that they may be serviced, reset, replaced or recalibrated by service people with normal service tools and equipment. Do not install electrical equipment in obvious passages, doorways, scuttles or crawl spaces which would impede or block the intended usage.
- D. Noise Control:
 - 1. Do not install outlet boxes back to back. Do not use straight through boxes.
 - 2. Do not place contactors, transformers, starters and similar noise producing devices on walls which are common to occupied spaces unless specifically called for on Drawings. Where such devices must be mounted on walls common to occupied

- spaces, mount or isolate in such a manner as to effectively prevent the transmission of their inherent noise to the occupied space.
- E. Firestopping: Coordinate location and protection level of fire and/or smoke rated walls, ceilings, and floors. When these assemblies are penetrated, seal around conduit and equipment with approved firestopping material. Install firestopping material complete as directed the manufacturer's installation instructions. Meet requirements of ASTM E814, Standard Test Method for Fire Tests of Through-Penetration Fire Stops.
- F. Conduit:
1. Conduit Joints: Assemble conduits continuous and secure to boxes, panels, and equipment with fittings to maintain continuity.
 2. Conceal conduits. Exposed conduits are permitted only in the following areas:
 - a. Mechanical rooms, electrical rooms or spaces where walls, ceilings and floors will not be covered with finished materials.
 - b. Existing walls that are concrete or block construction and where specifically noted on the Drawings.
 3. Do not install conduits on surface of building exterior, across roof, on top of parapet walls, or across floors. Where exposed conduits are permitted, install parallel and perpendicular to walls, tight to finished surfaces and neatly offset into boxes.
 4. Keep conduits a minimum of 12-inches away from steam or hot water radiant heating lines (at or above 104 degrees F) or 3-inches away from waste or water lines.
 5. Maximum Bends: Install no more than equivalent of three 90 degree bends between electrical boxes. Install no more than equivalent of two 90 degree bends between telecommunication boxes. Use conduit bodies to make sharp changes in direction, as around beams.
 6. Flexible Conduit: Install 12 inch minimum slack loop on flexible metallic conduit and liquidtight flexible metallic conduit.
 7. Conduit Size: Minimum trade size 3/4 inch.
 8. Conduit Use Locations:
 - a. Damp Locations: RMC or EMT up to 2 inches in diameter.
 - b. Dry, Protected: RMC or EMT.
 - c. In areas exposed to severe mechanical damage: RMC.
 - d. Sharp Bends and Elbows: RMC, EMT use factory elbows.
 - e. Install two pull strings/tapes in empty raceways. Secure pull strings/tapes at each end.
 - f. Elbow for Low Energy Signal Systems: Use long radius factory ells where linking sections of raceway for installation of signal cable.
 9. Branch Circuits: Do not change the intent of the branch circuits or controls without approval. Homeruns for 20 amp branch circuits may be combined to a maximum of six conductors in a homerun. Apply derating factors. Increase conductor size as needed.
- G. Conduit Fittings:
1. Use set screw type fittings only in dry locations. When set screw fittings are utilized, provide insulated continuous equipment ground conductor in conduit, from over current protection device to outlet.
 2. Use compression fittings in dry locations, damp and rain-exposed locations. Maximum size permitted in damp locations and locations exposed to rain is 2 inches in diameter.
 3. Provide corrosion-resistant punched-steel box knockout closures, conduit locknuts and plastic conduit bushings of the type and size to suit each respective use and installation.
 4. Use insulated type bushings with ground provision at switchboards, panelboards, safety disconnect switches, junction boxes and the like that have feeders 60 amperes and greater.

5. Provide conduit expansion fittings at building expansion joints and at locations where conduit is exposed to thermal expansion and contraction.
- H. Wires and Cables:
1. Conductor Installation: Install conductors with care to avoid damage to insulation. Do not apply greater tension on conductors than recommended by manufacturer during installation.
 2. Conductor Size and Quantity: Install no conductors smaller than 12AWG unless otherwise shown. Provide required conductors for a fully operable system.
 3. MC Cable is allowed for the following conditions. Installations not meeting these conditions will be removed and replaced at installer's own expense.
 - a. 20 and 30 amp branch circuiting where following conditions apply:
 - 1) Where there is a suspended ceiling with accessible space above (example: suspended acoustic ceiling tile).
 - 2) Do not use for homeruns from branch circuit to first device or luminaire in circuit.
 - 3) Do not use in walls in areas where MC cable cannot be fished into the walls after construction is completed. For example: walls with glazing or solid beams overhead, partial height walls, etc.
- I. Boxes:
1. Anchoring: Secure boxes rigidly to the substrate upon which they are being mounted, or solidly embed boxes in concrete or masonry.
 2. Noise Control: Provide acoustic putty pad to back side of each outlet box installed in acoustic rated walls.
 3. Coordinate electrical device locations and elevations (switches and receptacles) with architectural drawings to prevent mounting devices in mirrors, back splashes, and behind cabinets.
 4. Knockout Closures: Provide knockout closures to cap unused knockout holes where blanks have been removed.
 5. Code Compliance: Comply with CEC as applicable to construction and installation of electrical boxes and fittings and size boxes according to CEC, except as noted otherwise.
 6. Mount center of outlet boxes as required by Americans With Disabilities Act (ADA), or noted on drawings, the following distance above the floor:
 - a. Control Switches: 46 inches.
 - b. Receptacles: 18 inches.
 - c. Wall Phones: 46 inches.
 - d. Telecom Outlets: 18 inches.
 - e. Other Outlets: As indicated in other Sections of Specifications or as detailed on Drawings.
- J. Supporting Devices:
1. Safety factor of 4 required for every fastening device or support for electrical equipment installed. Support to withstand four times weight of equipment it supports. Provide seismic bracing per CBC requirements for this building location.
 2. Provide vertical support members for equipment and luminaires, straight and parallel to building walls. Provide horizontal support members straight and parallel to ceilings or finished floor, unless otherwise noted.
 3. Provide independent supports to structural member for luminaires, electrical materials, or equipment installed in or on ceiling, walls or in void spaces or over furred or suspended ceilings.
 4. Do not use other trade's fastening devices as supporting means for luminaires, electrical materials, or equipment.
 5. Do not fasten supports to pipes, ducts, mechanical equipment or conduit.
 6. Do not use supports or fastening devices to support other than one particular item.

7. Support conduits within 18 inches of outlets, boxes, panels, cabinets and deflections. Maximum distance between supports not to exceed 8 foot spacing.
 8. Support flexible conduits and MC Cable within 12 inches of outlets, boxes, panels, cabinets and deflections. Maximum distance between supports not to exceed 4 foot spacing.
 9. Securely suspend junction boxes, pull boxes or other conduit terminating housings located above suspended ceiling from the floor above or roof structure to prevent sagging and swaying.
 10. Provide seismic bracing per CBC requirements.
- K. Electrical Identification:
1. Conductor Identification: Apply markers on each conductor for power, control, signaling and communications circuits.
 2. Provide an engraved label on each major unit of electrical equipment indicating both equipment name and circuit serving equipment, including but not limited to the following items: Disconnect switches, relays, contactors, time switches, override switches, service disconnects, distribution switches, switchboards, branch circuit panelboards, and transformers.
 3. Install engraved label on the inside of flush panels, visible when door is opened. Install label on outside of surface panel. Secure nameplates to inside surface of door on panelboard that is recessed in finished locations.
 4. On the front of receptacle finish plates, provide label with the circuit that each device is connected to.
- L. Grounding:
1. Performance Requirements: Supplement the grounded neutral of the secondary distribution system with an equipment grounding system to properly safeguard the equipment and personnel. Install equipment grounding such that metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment and other conductive items in close proximity with electrical circuits operate continuously at ground potential and provide a low impedance path for possible ground fault currents.
 2. Raceway Grounding:
 - a. Ground metallic raceway systems. Bond to ground terminal with code size jumper except where code size or larger grounding conductor is included with circuit, use grounding bushing with lay-in lug.
 - b. Connect metal raceways, which terminate within an enclosure but without mechanical connection to the enclosure, by grounding bushings and ground wire to the grounding bus.
 - c. Where equipment supply conductors are in flexible metallic conduit, install stranded copper equipment grounding conductor from outlet box to equipment frame.
 - d. Install equipment grounding conductor, code size minimum in raceway systems.
 3. Boxes, Cabinets, Enclosures and Panelboards:
 - a. Bond grounding conductors to enclosure with specified conductors and lugs. Install lugs only on thoroughly cleaned contact surfaces.
 - b. Bond sections of service equipment enclosure to service ground bus.
 4. Receptacles: Connect ground terminal of receptacle to equipment ground system by No. 14 conductor bolted to outlet box. Self grounding nature of receptacle devices does not eliminate conductor bolted to outlet box.

3.4 FIELD QUALITY CONTROL

- A. Tests: Conduct tests of equipment and systems to demonstrate compliance with requirements specified in this Division. Refer to individual Specification Sections for required tests. Document tests and include in Closeout Documents. During site evaluations by

Architect, provide an electrician with tools to remove and replace trims, covers, devices, and the like, so that a proper evaluation of the installation can be performed.

- B. Verify electrical characteristics of equipment prior to installation of conduits and wiring for equipment.
- C. Wiring Device Tests: Test wiring devices to ensure electrical continuity of grounding connections, and after energizing circuitry, to demonstrate compliance with requirements. Test receptacles for line to neutral, line to ground and neutral to ground faults. Correct defective wiring.

3.5 CLEANING

- A. Remove dirt and debris caused by the execution of the electrical work. Leave the entire electrical system installed in clean, dust-free and proper working order.
- B. Thoroughly clean exposed portions of equipment, removing temporary labels and traces of foreign substances. Throughout work, remove construction debris and surplus materials accumulated during work.

END OF ELECTRICAL SPECIFICATIONS

APPENDIX 1

Industrial Hygiene Sampling Results



MICRO ANALYTICAL LABORATORIES, INC.

LEAD IN PAINT - FLAME AAS (SW846)

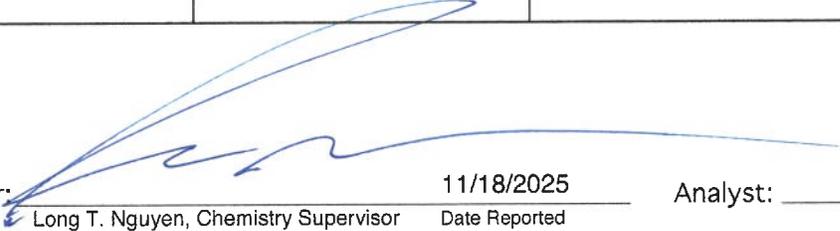
1092
 Paul Spillane
 Acumen Industrial Hygiene, Inc.
 1032 Irving Street, #922
 San Francisco, CA 94122-2216

PROJECT:
 PROJECT NO. COB 2555
 BERKELEY FIRE STA #6
 999 CEDAR
 BERKELEY, CA

Micro Log In **339858**
 Total Samples 7
 Date Sampled 11/18/2025
 Date Received 11/18/2025
 Date Analyzed 11/18/2025

Lead Concentration

Sample ID	Weight Percent	mg/kg (ppm)	RDL
Client: <u>COB2555-PB01</u> Lab: 339858-01 <u> </u> TAN PAINT ON SASH / WEST WINDOW	< 0.0079 %	< 79	0.0079 % 79 mg/kg
Client: <u>COB2555-PB02</u> Lab: 339858-02 <u> </u> TAN PAINT ON SILL / WEST WINDOW	< 0.0080 %	< 80	0.0080 % 80 mg/kg
Client: <u>COB2555-PB03</u> Lab: 339858-03 <u> </u> WHITE PAINT ON STUCCO / WEST WINDOW	0.11 %	1100	0.0080 % 80 mg/kg
Client: <u>COB2555-PB04</u> Lab: 339858-04 <u> </u> LITE GREEN PAINT ON DRYWALL / DAY ROOM WEST	< 0.0079 %	< 79	0.0079 % 79 mg/kg
Client: <u>COB2555-PB05</u> Lab: 339858-05 <u> </u> CREAM PAINT ON DRYWALL / KITCHEN WEST	< 0.0080 %	< 80	0.0080 % 80 mg/kg

Technical Supervisor: 

Long T. Nguyen, Chemistry Supervisor

11/18/2025

Date Reported

Analyst:

TLN

AIHA-LAP, LLC Accredited Laboratory, ID #101768. Samples are analyzed by Flame Atomic Absorption Spectrometry (FLAAS) using SOP 23-Paint. This SOP is based on U.S. EPA SW-846 Method 7420 for instrumental analysis, and on ASTM E-1645-21 for nitric acid and hydrogen peroxide digestion. Unless otherwise indicated on this report, all required Quality Control samples have been determined to be in control prior to releasing these analytical results. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. Note: due to software limitations, the number of reported significant figures does not necessarily reflect the uncertainty of the analysis. If the amount of sample available for analysis is lower than advisable for this method, detection limits and uncertainty will be higher. This report must not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. Unit explanations: mg = milligrams; kg = kilograms; ppm = parts per million. N/A = Not Applicable. RDL = Report Detection Limit.



ACUMEN

INDUSTRIAL HYGIENE INC

1032 IRVING ST. - BOX 922 SAN FRANCISCO CA 94122

TEL 415 242 6060 FAX 415 242 6006

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BULK CHAIN OF CUSTODY FORM

339858

Berkeley Fire Sta #6

Project No. COB 2555

Job Site: 999 CEDAR
Location: Berkeley, CA

Laboratory: MAL

Turnaround Time: Normal / 24 Hour / Rush

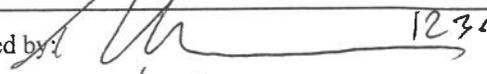
Sample Date: 11/18/25

Sampler: Paul M. Spillane, CIH, CAC

Sample No.	Description/ Location	Analysis
COB 2555		FLAA LEAD
P501	TAN PAINT ON SASH / WEST WINDOW	
P502	TAN PAINT ON SILL / WEST WINDOW	
P503	WHITE PAINT ON STUCCO / WEST WINDOW	
P504	LITE GREEN PAINT ON DRYWALL / DAY ROOM WEST	
P505	CREAM PAINT ON DRYWALL / KITCHEN WEST	
P506	LITE GREEN PAINT ON PLASTER / DAY ROOM SOUTH	
P507	TAN PAINT ON SASH / EAST WINDOW #	

Email to lab@acumen-ih.com

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports.

Sent by:  1235	Received by:  1235
Date sent: 11/18/25	Date received: 11/18/2025

Sent via Federal Express Air Bill:

Hand delivered

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)



1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2555
BERKELEY FIRE STA #6
999 CEDAR
BERKELEY, CA

Micro Log In **339856**
Total Samples 15
Date Sampled 11/18/2025
Date Received 11/18/2025
Date Analyzed 11/19/2025

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS	DOMINANT OTHER MATERIALS
Note: "ND" = No Asbestos Detected		

Client #: COB2555-1A Micro #: 339856-01 Analyst: DJS DJS PAINT ON WOOD SASH: WEST	ND	NFM: MISCELLANEOUS PARTICLES
Client #: COB2555-1B Micro #: 339856-02 Analyst: DJS PAINT ON WOOD SASH: WEST	ND	NFM: MISCELLANEOUS PARTICLES
Client #: COB2555-2A Micro #: 339856-03 Analyst: DJS MO TEXTURED PAINT ON CONCRETE STEPS / SOUTH	CONCRETE: ND SKIM COAT: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Client #: COB2555-2B Micro #: 339856-04 Analyst: DJS TEXTURED PAINT ON CONCRETE STEPS / SOUTH	CONCRETE: ND SKIM COAT: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Client #: COB2555-2C Micro #: 339856-05 Analyst: DJS PAINT ON CONCRETE STEPS / SOUTH	CONCRETE: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER

Technical Supervisor: *Mond Olimas* 11/19/2025
 For Baojia Ke, Ph.D. Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA - Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples (1982). Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 µm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Tremolite-asbestos or actinolite-asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; if asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems, and may not be representative of true relative proportions of such layers, as assessed by inspectors in the field. Thus, compositing is only a confirmatory technique and is based on customers' descriptions of material as "joint compound" (or similar terms). Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)



1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2555
BERKELEY FIRE STA #6
999 CEDAR
BERKELEY, CA

Micro Log In **339856**
Total Samples 15
Date Sampled 11/18/2025
Date Received 11/18/2025
Date Analyzed 11/19/2025

SAMPLE IDENTIFICATION

ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS
 Note: "ND" = No Asbestos Detected

**DOMINANT
OTHER MATERIALS**

Client #: COB2555-3A	STUCCO: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Micro #: 339856-06 Analyst: DJS STUCCO & PAINT / SOUTH @ STEPS		
Client #: COB2555-3B	STUCCO: ND SKIM COAT: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Micro #: 339856-07 Analyst: DJS STUCCO & PAINT / SOUTH @ STEPS		
Client #: COB2555-3C	STUCCO: ND SKIM COAT: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Micro #: 339856-08 Analyst: DJS STUCCO & PAINT / SOUTH @ STEPS		
Client #: COB2555-3D	STUCCO: ND SKIM COAT: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Micro #: 339856-09 Analyst: DJS STUCCO & PAINT / EAST WALL / COLUMN		
Client #: COB2555-4A	PLASTER: ND SKIM COAT: ND PAINT: ND	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Micro #: 339856-10 Analyst: DJS PAINT PLASTER & SKIM COAT / DAY ROOM		

Technical Supervisor:

Baojia Ke, Ph.D.

 11/19/2025
Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA - Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (1982). Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 μm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Tremolite-asbestos or actinolite-asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; if asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems, and may not be representative of true relative proportions of such layers, as assessed by inspectors in the field. Thus, compositing is only a confirmatory technique and is based on customers' descriptions of material as "joint compound" (or similar terms). Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.

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PROJECT:
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BERKELEY FIRE STA #6
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Micro Log In **339856**
 Total Samples 15
 Date Sampled 11/18/2025
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 Date Analyzed 11/19/2025

SAMPLE IDENTIFICATION

ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS
 Note: "ND" = No Asbestos Detected

DOMINANT OTHER MATERIALS

Client #: COB2555-4B Micro #: 339856-11 Analyst: DJS PLASTER BOARD / KITCHEN / WEST	PLASTER BOARD: ND COMPOUND: ND TAPE: ND PAINT: ND	10 % CELLULOSE NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: COB2555-5A Micro #: 339856-12 Analyst: DJS MO DRYWALL W/ TAPING MUD / DAY ROOM	DRYWALL: ND TAPING MUD: ND PAINT: ND	10 % CELLULOSE NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: COB2555-5B Micro #: 339856-13 Analyst: DJS DRYWALL W/ TAPING MUD / KITCHEN	DRYWALL: ND PAINT: ND INSUFFICIENT TAPING MUD FOR ANALYSIS	10 % CELLULOSE NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: COB2555-6A Micro #: 339856-14 Analyst: DJS WINDOW PUTTY / EAST 1ST WINDOW	PUTTY: ND PAINT: ND	NFM: MISCELLANEOUS PARTICLES
Client #: COB2555-6B Micro #: 339856-15 Analyst: DJS WINDOW PUTTY / EAST 4TH WINDOW	PUTTY: ND PAINT: ND	NFM: MISCELLANEOUS PARTICLES

Technical Supervisor:

Maoli Baojia 11/19/2025
 Baojia Ke, Ph.D. Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA – Appendix E to Subpart E of 40 CFR Part 763: Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (1982). Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 µm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Tremolite-asbestos or actinolite-asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; if asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems, and may not be representative of true relative proportions of such layers, as assessed by inspectors in the field. Thus, compositing is only a confirmatory technique and is based on customers' descriptions of material as "joint compound" (or similar terms). Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.



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INDUSTRIAL HYGIENE INC

1032 IRVING ST. - BOX 922 SAN FRANCISCO CA 94122

TEL 415 242 6060 FAX 415 242 6006

WWW.ACUMEN-IH.COM

BULK CHAIN OF CUSTODY FORM

339856

Project No. CO B 2555

BERKELEY FIRE STA #6

Job Site: 999 CEDAR

Laboratory: MAL

Location: BERKELEY CA

Turnaround Time: Normal / 24 Hour / Rush

Sample Date: 11/18/25

Sampler: Paul M. Spillane, CIH, CAC

Sample No.	Description/ Location	Analysis
COB 2555		PLM ASBESTOS
01A	PAINT ON WOOD SASH : WEST	
01B	/ / / / : WEST	
02A	TEXTURED PAINT ON CONCRETE STEPS / SOUTH	
02B	/ / / / / / / /	
02C	PAINT ON CONCRETE STEPS /	
03A	STUCCO & PAINT / SOUTH @ STEPS	
03B	/ / / / / / / /	
03C	/ / / / / / / /	
03D	/ / / / / / / /	
04A	EAST WALL / COLUMN	
04A	PAINT PLASTER & STAIN COAT / DAY ROOM	

Email to lab@acumen-ih.com

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports.

Sent by: [Signature]	Received by: [Signature]
Date sent: 11/18/25	Date received: 11/18/2025

Sent via Federal Express Air Bill:

Hand delivered



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BULK CHAIN OF CUSTODY FORM

339856

Project No. COB 2555

Job Site: Berk Fire Sta #6
Location: 999 CEDAR

Laboratory: MAC

Sample Date: 11/18/25

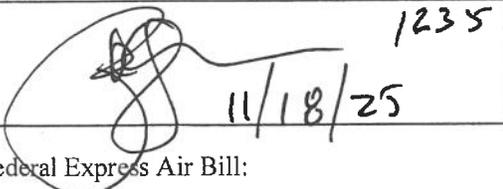
Turnaround Time: Normal / 24 Hour / Rush

Sampler: Paul M. Spillane, CIH, CAC

Sample No.	Description/ Location	Analysis
COB 2555 04B	PLASTER BOARD / KITCHEN / WEST	PLM ASBESTOS
05A	DRYWALL w/ TAPING MUD / DAY ROOM	
05B	/ / / / / KITCHEN	
06A	WINDOW PUTTY / EAST 1 ST WINDOW	
06B	/ / / EAST 4 TH	

Email to lab@acumen-ih.com

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports.

Sent by: 	Received by: <u>Kaw Suelap</u>
Date sent: <u>11/18/25</u>	Date received: <u>11/18/2025</u>

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DATE