

**BIDDING DOCUMENTS**  
**FOR THE**  
**MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT**  
**FOR**  
**MAKERSPACE CONVERSION AT SAN JACINTO**  
**CAMPUS**

**DSA Application No. N/A**

**Informal Bid No. 2022-001**

**MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT**  
**1499 North State College**  
**San Jacinto, CA 92583**

**Bid Release Date: September 23, 2021**

**MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT**  
**NOTICE OF INFORMAL BID**  
**PURSUANT TO CALIFORNIA UNIFORM PUBLIC CONSTRUCTION COST ACCOUNT**  
**ACT (PCC22034)**  
**INFORMAL BID NO. 2022-001**  
**MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

**Submittal:** Submissions must be received on or before:  
**Tuesday, October 12, 2021, at 2:00 p.m.**

Only sealed bids will be accepted at this time due to the COVID-19 Pandemic. Sealed bids may be mailed to address below. Or dropped off in-person to the following address, during the specific drop-off dates and times ONLY:

**Bid drop-off date/times: October 11 and 12, 2021 8:00am-2:00pm**

No public bid opening will occur. Bid opening will be read aloud on Zoom meeting at the link and numbers below:

Join Zoom Meeting:

<https://msjc-edu.zoom.us/j/91380598790?pwd=ZngrcEJmMUhoYlYwb2crTDg3ZitLUT09>

Meeting ID: 913 8059 8790

Passcode: 725221

One tap mobile

+16699009128,,91380598790#,,,,\*725221# US (San Jose)

+12532158782,,91380598790#,,,,\*725221# US (Tacoma)

Dial by your location

+1 669 900 9128 US (San Jose)

**Addressed to:** Mt. San Jacinto College  
Purchasing Office, Bldg. AA  
Attn: Tammy Cunningham  
1499 N. State Street  
San Jacinto, CA 92583

**Project Name: Bid No. 2022-001 Makerspace Conversion at San Jacinto Campus**

A **mandatory** pre-bid meeting and job walk for prime contractors will be held on **Tuesday, September 28, 2021 at 10:00 a.m.** at the District, **1499 N. State Street, San Jacinto, Ca 92583 (meet outside Bldg. 100, by north/east entrance)**. Contractors are required to sign in and attend the entirety of the pre-bid meeting and job walk.

Masks are mandatory when indoors, whether you have been vaccinated or not. Visitors must submit a COVID-19 Self-Check every day they will be on campus. Visit the link below to submit the "Visitor Daily Self-Check": <https://www.msjc.edu/safereturn/>

**Construction Cost Estimate: \$124,000.00**

**Bid Security Required:** 10% of the maximum amount of the Bid in the form of Bid Bond, Cash, or Certified or Cashier's Check.

**Bonds Required:** Performance and Labor & Materials; each 100%.

**Required License:** **B – General Building**

**Project Scope of Work Description:** It is the intent of the Contract to construct tenant improvements to a portion of the existing Building 100 (Business and Technology) at the San Jacinto Campus to facilitate the implementation of District-supplied makerspace equipment. The scope of the work includes (but not limited to) modifications and replacement to the existing electrical, lighting, fire alarm, low voltage systems and components; modifications to existing mechanical system supply/return locations within the rooms; interior painting and finish refurbishment; selective replacement of flooring/base; infrastructure installation for security cameras and card access control systems; and coordination with District vendor for the installation of educational equipment.

**Bid documents available at:** Mt. San Jacinto College, Purchasing Office website at <https://www.msjc.edu/purchasing/current-bids.html>. Bidders are responsible to regularly check the District's website for addendums.

**Pre-Qualification of Bidders:** As a condition of the informal bidding for this project, prospective bidders are required to be on our current 2021 CUPCAA Pre-Qualified Contractor's List. Prequalification documents are available on our Purchasing Office website at <https://www.msjc.edu/purchasing/upccaa.html> or by contacting the Purchasing Office at [bids@msjc.edu](mailto:bids@msjc.edu). Applications for prequalification for this project are due by October 1, 2021 by 5:00 p.m.

**Request for Information are due: Friday, October 1, 2021 by 5:00 p.m.**

RFI questions are to be submitted in writing only to the following contacts:

TO: Tammy Cunningham, Director of Procurement & General Services

[Bids@msjc.edu](mailto:Bids@msjc.edu)

CC: Michael Stephens, Principal at SGH Architects

[mstephens@sgharch.com](mailto:mstephens@sgharch.com)

Reference in email subject line: RFI - Bid No. 2022-001 MSJC Makerspace Conversion

## INSTRUCTIONS FOR BIDDERS

### 1. Preparation and Submittal of Bid Proposal.

**1.1 Bid Proposal Preparation.** All information required by the bid forms must be completely and accurately provided. Numbers shall be stated in both words and figures where so indicated in the bid forms; conflicts between a number stated in words and in figures are governed by the words. Partially completed Bid Proposals or Bid Proposals submitted on other than the bid forms included herein may be deemed non-responsive and may be rejected. Bid Proposals not conforming to these Instructions for Bidders may be deemed non-responsive and rejected.

**1.2 Bid Proposal Submittal.** Bid Proposals shall be submitted at the place designated in the Notice of Bid in sealed envelopes bearing on the outside the Bidder's name and address along with an identification of the Bid number and description of the Bid for which the Bid Proposal is submitted. Bidders are solely responsible for timely submission of Bid Proposals to the District at the place designated in the Notice of Bids

**1.3 Date and Time of Bid Proposal Submittal.** The District will place a clock ("the District Clock") in a conspicuous location at the place designated for submittal of Bid Proposals. For purposes of determining the time that a Bid Proposal is submitted, the District Clock shall be controlling. The foregoing notwithstanding, whether or not Bid Proposals are opened exactly at the time fixed in the Notice of Bids or in any Addenda extending the date and/or time due to material changes, no Bid Proposals shall be received or considered by the District after it has commenced the public opening and reading of Bid Proposals. Bid Proposals submitted after such time are non-responsive and will be returned to the Bidder unopened.

**2. Bid Security.** Each Bid Proposal shall be accompanied by Bid Security in the form of: (a) cash, (b) a certified or cashier's check made payable to the District or (c) a Bid Bond, in the form and content attached hereto, in favor of the District executed by the Bidder as a principal and a Surety as surety (the "Bid Security") in an amount not less than the percentage of the maximum amount of the Bid Proposal. Any Bid Proposal submitted without the required Bid Security is non-responsive and will be rejected. If the Bid Security is in the form of a Bid Bond, the Bidder's Bid Proposal shall be deemed responsive only if the Bid Bond is in the form and content included herein and the Surety is an Admitted Surety Insurer under Code of Civil Procedure §995.120. If the Bid Security is a Bid Bond, the Bidder submitting the Bid Proposal and/or its Surety must complete the portion of the form of Bid Bond indicating the Bid Number and description of Bid; failure to do so will render the Bid Proposal non-responsive.

**3. Documents Accompanying Bid Proposal; Signatures.** The Bid Proposal must be submitted with all documents listed in the Notice of Bid. All bid forms shall be executed by an individual duly authorized to execute the same on behalf of the Bidder.

**4. Modifications.** Changes to the bid forms which are not specifically called for or permitted may result in the District's rejection of the Bid Proposal as being non-responsive. No oral or telephonic modification of any submitted Bid Proposal will be considered.

**5. Erasures; Inconsistent or Illegible Bid Proposals.** Bid Proposals must not contain any erasures, interlineations or other corrections unless the same are suitably authenticated by affixing in the

margin immediately opposite such erasure, interlineation or correction the surname(s) of the person(s) signing the Bid Proposal. Any Bid Proposal not conforming with the foregoing may be deemed by the District to be non-responsive. If any Bid Proposal or portions thereof, is determined by the District to be illegible, ambiguous or inconsistent, whether by virtue of any erasures, interlineations, corrections or otherwise, the District may reject such a Bid Proposal as being non-responsive.

6. **Examination of Site and Contract Documents.** Each Bidder shall, at its sole cost and expense, inspect the Site and become fully acquainted with the Contract Documents and conditions affecting the Work. The failure of a Bidder to receive or examine any of the Contract Documents or to inspect the Site shall not relieve such Bidder from any obligation with respect to the Bid Proposal, or the Work required under the Contract Documents. The District assumes no responsibility or liability to any Bidder for, nor shall the District be bound by, any understandings, representations or agreements of the District's agents, employees or officers concerning the Contract Documents or the Work made prior to execution of the Contract which are not in the form of Bid Addenda duly issued by the District. The submission of a Bid Proposal shall be deemed prima facie evidence of the Bidder's full compliance with the requirements of this section.
7. **Interpretation of Drawings, Specifications or Contract Documents.** Any Bidder in doubt as to the true meaning of any part of the Contract Documents; who finds discrepancies, errors or omissions therein; or who finds variances in any of the Contract Documents with applicable rules, regulations, ordinances and/or laws, may submit to the District a written request for an interpretation or correction thereof. It is the sole and exclusive responsibility of the Bidder to submit such request by the due date of the Request for Information. Interpretations or corrections of the Contract Documents will be by written addendum issued by the District or the Architect. **Any interpretation or correction of Contract Documents will only be made by Addendum duly issued, a copy of any such addendum will be mailed or delivered to each Bidder receiving a set of the Contract Documents.** No person is authorized to render an oral interpretation or correction of any portion of the Contract Documents to any Bidder, and no Bidder is authorized to rely on any such oral interpretation or correction. Failure to request interpretation or clarification of any portion of the Contract Documents pursuant to the foregoing is a waiver of any discrepancy, defect or conflict therein.
8. **District's Right to Modify Contract Documents.** Before the public opening and reading of Bid Proposals, the District may modify the Work, the Contract Documents, or any portion(s) thereof by the issuance of written addenda disseminated to all Bidders who have obtained a copy of the Specifications, Drawings and Contract Documents pursuant to the Call for Bids. If the District issues any addenda during the bidding, the failure of any Bidder to acknowledge such addenda in its Bid Proposal will render the Bid Proposal non-responsive and rejected.
- 8.1 **Addenda.** Clarification or any other notice of a change in the Bidding Documents will be issued only by the District and only in the form of a written Addendum and shall be made available at <http://www.msjc.edu/Purchasing/current-bids.html>. The District may also transmit Addenda by e-mail to any bidders known by the District to have received a complete set of Bidding Documents. However, all bidders are solely responsible for obtaining any Addenda and the District does not guarantee that it will provide any of the Addenda directly to any bidder. Any other purported Addenda are void and unenforceable. Bidder is responsible for ascertaining the disposition of all Addenda issued regardless of Owner notification and to acknowledge all Addenda in the submitted sealed bid prior to the bid opening. Copies of Addendum will be made available for inspection wherever Bidding Documents are on file for inspection. Each Addendum

will be numbered, dated, and identified with the Project number. Oral statements or any instructions in any form, other than Addendum as described above, shall be void and unenforceable. Addendum issued by the District and not noted as being acknowledged by bidder as required in the Bid Form, may result in the bid being deemed non-responsive.

- 8.2 Inquiries and Clarifications.** This document is for informational purposes and shall not relieve the Bidder of the requirements to fully familiarize itself with all the factors affecting the Project and its Bid. The Bidder is advised that all inquiries and clarifications about the Bid Documents, Drawings, Specifications, etc. shall be submitted to the District in writing by the Request for Information (RFI) due date. The District will respond in the form of an addendum to all bidders. Verbal communication by either party with regard to this matter is invalid. Inquiries shall be sent to only the following persons:

TO: Tammy Cunningham, Director of Procurement & General Services  
[Bids@msjc.edu](mailto:Bids@msjc.edu)

CC: Michael Stephens, Principal at SGH Architects  
[mstephens@sgharch.com](mailto:mstephens@sgharch.com)

**Reference in subject line: RFI - Bid No. 2022-001 MSJC Makerspace Conversion**

- 9. Mandatory Job-Walk.** The District will conduct a Mandatory Job-Walk at the time(s) and place(s) designated in the Notice of Bid. The District may, in its sole and exclusive discretion, elect to conduct one or more Job-Walk(s) in addition to that set forth in the Notice of Bid, in which event the District shall notify all Bidders who have theretofore obtained the Contract Documents pursuant to the Notice of Bid to any such additional Job-Walk. If the District elects to conduct any Job-Walk in addition to that set forth in the Notice of Bid, the District shall, in its notice of any such additional Job-Walk(s), indicate whether Bidders' attendance at such additional Job-Walk(s) is/are mandatory.
- 10. Withdrawal of Bid Proposal.** Any Bidder may withdraw its Bid Proposal without penalty by written request received by the District prior to the scheduled closing time for the receipt of Bid Proposals. A written notice of withdrawal of a submitted Bid Proposal received after the scheduled closing time for receipt of Bid Proposals shall not be considered by the District, nor effective to withdraw such Bid Proposal except as relevant to Public Contract Code §5100 et seq.
- 11. Agreement, Insurance and Bonds.** The Agreement which the successful Bidder, as Contractor, will be required to execute along with the forms and amounts of the Labor and Material Payment Bond, Performance Bond and Insurance Endorsement which will be required to be furnished are included in the Contract Documents and shall be carefully examined by the Bidder.
- 12. Non-Collusion Declaration.** The form of Non-Collusion Declaration included in the Contract Documents must be completed and duly executed on behalf of the Bidder; failure of a Bidder to submit a completed and executed Non-Collusion Declaration with its Bid Proposal will render the Bid Proposal non-responsive.
- 13. Contractor's License.** No Bid Proposal will be considered from a Bidder who, at the time Bid Proposals are opened, is not licensed to perform the Work for which the Bid Proposal is submitted, in accordance with the Contractor's License Law, California Business & Professions Code §§7000 et seq. This requirement is not a mere formality and will not be waived by the District or its Board of Trustees. The Contractor will be required to maintain the license(s) through the duration of the Contract. Any questions concerning licensing may be referred to the Registrar, Contractors' State License Board, P.O. Box 2600, Sacramento, CA 95826.

**14. Subcontractors.**

- 14.1 Designation of Subcontractors; Subcontractors List.** Each Bidder shall submit a list of its proposed Subcontractors for the proposed Work as required by the Subletting and Subcontracting Fair Practices Act (California Public Contract Code §§4100 et seq.) on the form furnished. Bidder must designate the name, location, and trade of ALL listed Subcontractors with the Bid Proposal. The listed Subcontractors' license numbers and the value of their trades or portions of the work must be submitted to the District within 24 hours after the public opening and reading of the Bids. The failure of any Bid Proposal to include all information required by the Subcontractors List will result in rejection of the Bid Proposal for non-responsiveness.
- 14.2 Work of Subcontractors.** All Bidders are referred to the Contract Documents and the notation therein that all Contract Documents are intended to be complimentary and that the organization or arrangements of the Specifications and Drawings shall not limit the extent of the Work of the Contract Documents. Accordingly, all Bidders are encouraged to disseminate all of the Specifications, Drawings and other Contract Documents to all persons or entities submitting sub-bids to the Bidder. The omission of any portion or item of Work from the Bid Proposal or from the sub-bidders' sub-bids which is/are necessary to produce the intended results and/or which are reasonably inferable from the Contract Documents is not a basis for adjustment of the Contract Price or the Contract Time. Dissemination of the Contract Documents to sub-bidders and dissemination of addenda issued during the bidding process is solely the responsibility of each Bidder.

**15. Award of Contract.**

- 15.1 Waiver of Irregularities or Informalities.** The District reserves the right to reject any and all Bid Proposals or to waive any irregularities or informalities in any Bid Proposal or in the bidding.
- 15.2 Award to Lowest Responsive Responsible Bidder.** The award of the Contract will be to the responsible Bidder submitting the lowest responsive Bid Proposal on the basis of the Base Bid Proposal or the Base Bid Proposal and Alternate Bid Items, if any, selected in accordance with these Instructions for Bidders.
- 15.3 Alternates:** If alternate bids are called for, the Contract may be awarded at the election of Governing Board to the lowest responsible and responsive bidder using the method and procedures outline in the Notice Inviting Bids and as specified in the section entitled Alternate/Deductive Bid Alternates.
- a. Subcontractor Listing for Alternates. If alternate bids are called for and the bidder intends to use different or additional subcontractors, a separate list of subcontractors must be submitted for each alternate.
- 15.4 Responsive Bid Proposal.** A responsive Bid Proposal shall mean a Bid Proposal which conforms, in all material respects with the Bid and Contract Documents.

- 15.5 Responsible Bidder.** A responsible Bidder is a Bidder who has the capability in all respects, to perform fully the requirements of the Contract Documents and the moral and business integrity and reliability which will assure good faith performance. In determining responsibility, the following criteria will be considered: (i) the ability, capacity and skill of the Bidder to perform the Work of the Contract Documents; (ii) whether the Bidder can perform the Work promptly and within the time specified, without delay or interference; (iii) the character, integrity, reputation, judgment, experience and efficiency of the Bidder; (iv) the quality of performance of the Bidder on previous contracts, by way of example only, the following information will be considered: (a) the administrative, consultant or other cost overruns incurred by the District on previous contracts with the Bidder; (b) the Bidder's compliance record with contract general conditions on other projects; (c) the submittal by the Bidder of excessive and/or unsubstantiated extra cost proposals and claims on other projects; (d) the Bidder's record for completion of work within the contract time and the Bidder's compliance with the scheduling and coordination requirements on other projects; (e) the Bidder's demonstrated cooperation with the District and other contractors on previous contracts; (f) whether the work performed and materials furnished on previous contracts was in accordance with the Contract Documents; (v) the previous and existing compliance by the Bidder with laws and ordinances relating to contracts; (vi) the sufficiency of the financial resources and ability of the Bidder to perform the work of the Contract Documents; (vii) the quality, availability and adaptability of the goods or services to the particular use required; (viii) the ability of the Bidder to provide future maintenance and service for the warranty period of the Contract; (ix) whether the Bidder is in arrears on debt or contract or is a defaulter on any surety bond; (x) such other information as may be secured by the District having a bearing on the decision to award the Contract, to include without limitation the ability, experience and commitment of the Bidder to properly and reasonably plan, schedule, coordinate and execute the Work of the Contract Documents and whether the Bidder has ever been debarred from bidding or found ineligible for bidding on any other projects. The ability of a Bidder to provide the required bonds will not of itself demonstrate responsibility of the Bidder. Upon request of the District, Bidder must promptly submit satisfactory evidence of any of the items listed above.
- 16. No Withdrawal of Bid Proposals.** Bid Proposals shall not be withdrawn by any Bidder for a period of **ninety (90)** days after the opening of Bid Proposals. During this time, all Bidders shall guarantee prices quoted in their respective Bid Proposals.
- 17. Bid Security Return.** The Bid Security of three or more low Bidders, the number being solely at the discretion of the District, will be held by the District for ten (10) days after the period for which Bid Proposals must be held open (which is set forth in the Call for Bids) or until posting by the successful Bidder(s) of the bonds, certificates of insurance required, and return of executed copies of the Agreement, whichever first occurs, at which time the Bid Security of such other Bidders will be returned to them.
- 18. Forfeiture of Bid Security.** If the Bidder awarded the Contract fails or refuses to execute the Agreement within ten (10) days from the date of receiving notification that it is the Bidder to whom the Contract has been awarded, the District may declare the Bidder's Bid Security forfeited as damages caused by the failure of the Bidder to enter into the Contract and may thereupon award the Contract for the Work to the responsible Bidder submitting the next lowest Bid Proposal or may call for new bids, in its sole and exclusive discretion.

19. **Anti-Discrimination.** It is the policy of the District that there be no discrimination against any prospective or active employee engaged in the Work because of race, color, ancestry, national origin, religious creed, sex, age or marital status. All Bidders agree to comply with the District's anti-discrimination policy and all applicable Federal and California anti-discrimination laws including but not limited to the California Fair Employment & Housing Act beginning with California Government Code §§12940 et seq. and California Labor Code §1735. In addition, all Bidders agree to require like compliance by any Subcontractor employed by them on the Work of the Contract.
20. **Hold Harmless.** The Bidder shall defend, indemnify and hold harmless District, Architect, Inspector, the State of California and their officers, employees, agents, and independent contractors as set forth in the Contract.
21. **Certification of Workers' Compensation Insurance.** Pursuant to California Labor Code §3700, the successful Bidder shall secure Workers' Compensation Insurance for its employees engaged in the Work of the Contract. The successful Bidder shall sign and deliver to the District the following certificate, included as part of the Contract Documents, prior to performing any of the Work under the Contract:

"I am aware of the provisions of §3700 of the California 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 the Contract."
22. **Drug Free Workplace Certificate.** In accordance with California Government Code §§8350 et seq., the Drug Free Workplace Act of 1990, the successful Bidder will be required to execute a Drug Free Workplace Certificate concurrently with execution of the Agreement attached hereto. The successful Bidder will be required to implement and take the affirmative measures outlined in the Drug Free Workplace Certificate and in California Government Code §§8350 et seq. Failure of the successful Bidder to comply with the measures outlined in the Drug Free Workplace Certificate and in California Government Code §§8350 et seq. may result in penalties, including without limitation, the termination of the Agreement, the suspension of any payment of the Contract Price otherwise due under the Contract Documents and/or debarment of the successful Bidder.
23. **Prevailing Wage Rates.** The Contractor and all Subcontractors performing any portion of the Work shall pay not less than the applicable prevailing wage rate for the classification of labor provided by their respective workers in prosecution and execution of the Work. Pursuant to California Labor Code §1773, the Director of the Department of Industrial Relations of the State of California has determined the generally prevailing rates of wages in the locality in which the Work is to be performed. The Contractor awarded the Contract for the Work (the "Contract") shall post a copy of all applicable prevailing wage rates for the Work at conspicuous locations at the Site of the Work.
24. **Compliance with Senate Bill 854.** Senate Bill 854 was signed into law on June 20, 2014, and provides for new requirements for both contractors and subcontractors for any public works project. The new laws take effect on July 1, 2014. This Project is a public works project as defined in Labor Code section 1720. Each Contractor bidding on this Project and all Subcontractors

performing any portion of the Work must comply with the requirements of Senate Bill 854 including, without limitation, Labor Code Sections 1725.5 and 1771.1.

Each Contractor bidding on this Project and all Subcontractors performing any portion of the Work must register with the California Department of Industrial Relations (“DIR”) and qualified to perform public work pursuant to Labor Code section 1725.5 throughout the duration of the Project. Each Contractor and Subcontractor will be required to pay an initial set-up fee as well as an annual renewal fee to the DIR. The fee has initially been set at three hundred dollars (\$300.00) but is subject to change. For more information, and up to date requirements, Contractors are required to periodically review the DIR’s website is <http://www.dir.ca.gov>. The Contractor shall provide proof that it, and all subcontractors providing any work on the Project, are currently registered with DIR. Contractor shall provide proof that it, and all subcontractors providing any work on the Project, are currently registered with DIR. If any subcontractor is not registered with DIR throughout the Project, Contractor may be required to replace said subcontractor at no cost or penalty to the District or the District may terminate this agreement for cause, as set forth below. Contractor shall be solely responsible for ensuring compliance with Labor Code section 1725.5 as well as any requirements implemented by DIR applicable to its services or its subcontractors throughout the term of the Agreement and in no event shall Contractor be granted increased payment from the District or any time extensions to complete the Project as a result of Contractor’s efforts to maintain compliance with the Labor Code or any requirements implemented by the DIR. Failure to comply with these requirements shall be deemed a material breach of this Agreement and ground for termination for cause. The Contractor and all subcontractors shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4 on at least on a monthly basis (or more frequently if required by the District or the Labor Commissioner) and in a format prescribed by the Labor Commissioner. The District reserves the right to withhold contract payments if the District is notified, or determines as the result of its own investigation, that Contractor is in violation of any of the requirements set forth in Labor Code section 1720 et seq. at no penalty or cost to the District. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE). Contractors and Subcontractors who apply to the DIR will be required to meet certain minimum qualifications to bid on any public works projects. These minimum requirements include: (i) workers compensation coverage, (ii) Contractors State License Board license (if applicable to the trade), (iii) no delinquent unpaid wage or penalty assessments owed to any employee or enforcement agency, (iv) no state or Federal debarment, and (v) no prior violations of this registration requirement (for a first violation in a 12 month period a Contractor or Subcontractor can still qualify by paying the applicable penalty). Each Contractor and Subcontractor should carefully review the DIR website for all applicable requirements to be eligible to bid on this Project and if needed should consult with an attorney. Contractor shall be solely responsible for complying with any and all requirements issued by the DIR throughout the Project and shall indemnify the District for any violation of the applicable DIR requirements

Subject to certain limitations, each Contractor and Subcontractor may be required to comply with California Labor Code section 1776 (which requires the submission of certified payroll records). These records if required will need to be submitted on a monthly basis to the California Labor Commissioner. Each Contractor and Subcontractor should carefully review the DIR website for all applicable requirements related to certified payroll being required on this Project and if needed should consult with an attorney.

25. **Performance of Work with Own Forces.** Contractor shall perform at least 15% of the Work, exclusive of supervisory and clerical work without the services of any subcontractor. Contractor shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills as may be necessary to perform the Work in accordance with the Contract Documents.
26. **Cost Accounting Act.** This Project is being let in accordance with the Uniform Public Construction Cost Accounting (“CUPCCAA”) Act set forth in Public Contract Code section 22000 et seq. Bidders shall comply with any requirements set forth in the CUPCCAA including all guidelines and requirements in the current California Uniform Construction Cost Accounting Commission Cost Accounting Policies and Procedures Manual. Only Contractors included on the District’s Pre-Qualified List shall submit bids for the Project as set forth in the CUPCCAA. Bids will not be accepted if a Contractor has not been added to the Pre-Qualified Contractor List for the current Calendar Year. Interested Contractors must complete the UPCCAA Contractor Questionnaire Form to be placed on the Pre-Qualified Contractor List. Bidders may obtain a prequalification questionnaire at Mt. San Jacinto Community College District Purchasing Office webpage at <https://www.msjc.edu/Purchasing/upccaa.html> or by contacting the Purchasing Office at [purchasing@msjc.edu](mailto:purchasing@msjc.edu). Prequalification documents must be **submitted by ten days before the bid opening.**

*-End of Instructions to Bidders-*

**PRE-BID CLARIFICATION FORM** (For Contractor's Use)

PROJECT NAME: <b>MSJC MAKERSPCE CONVERSION SAN JACINTO CAMPUS</b>	MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS		
PROJECT NUMBER:	Bid No. <b>2022-001</b>		
<b>TO:</b>	Tammy Cunningham, MSJC	<b>EMAIL:</b>	<a href="mailto:bids@msjc.edu">bids@msjc.edu</a>
<b>CC:</b>	Michael Stephens, SGH Architects		<a href="mailto:mstephens@sgharch.com">mstephens@sgharch.com</a>

DATE:			
FROM:		EMAIL:	
DOCUMENT/DIVISION NUMBER:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:
RESPONSE TO CLARIFICATION:

**CHECKLIST OF MANDATORY BID FORMS**

**INFORMAL BID NO. 2022-001**

**MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

**THE FOLLOWING SECTION CONTAINS THE DOCUMENTS THAT ARE TO BE  
RETURNED BY BIDDERS ON THE BID DUE DATE**

- **BID PROPOSAL FORM**
- **DESIGNATED SUBCONTRACTORS LIST**
- **BID GUARANTEE FORM**
- **NON-COLLUSION DECLARATION**
- **REQUEST FOR SUBSTITUTION AT TIME OF BID**
- **ACKNOWLEDGEMENT OF BIDDING PRACTICES REGARDING  
INDEMNITY**
- **WORKER'S COMPENSATION CERTIFICATION**
- **CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE  
WORKPLACE**
- **CONTRACTOR'S CERTIFICATE REGARDING ALCOHOLIC BEVERAGE  
AND TOBACCO-FREE CAMPUS POLICY**
- **STATEMENT OF INTENT TO MEET DVBE PARTICIPATION GOALS**
- **HOLD HARMLESS AGREEMENT**
- **PREVAILING WAGE CERTIFICATION**
- **BID BOND**

**BID FORM**

**INFORMAL BID NO. 2022-001**

**MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

To: Board of Trustees of the MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
("District")

From: \_\_\_\_\_  
(Legal Name of Bidder)

**PROJECT: MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

The undersigned declares that the Informal Bid Documents including, without limitation, the Notice of Informal Bid and the Informal Bid Submission Instructions have been read and agrees and proposes to furnish all necessary labor, materials, equipment, and services to perform and furnish all work in accordance with the terms and conditions of the Informal Bid Documents, including, without limitation, the Drawings and Specifications of **Bid No. 2022-001 MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS** ("project") and will accept in full payment for that work the following total lump sum amount, all taxes and markup included:

**Total Bid Amount (Including any allowances):**

Amount:       \$ \_\_\_\_\_

Written:       Dollars: \_\_\_\_\_

**NOTE:** Total Base Bid Amount shall include any allowance per, SECTION 01 21 00 - ALLOWANCES in the DIVISION 1 GENERAL REQUIEMENTS, which will be used as approved by the District Representative. The bidder confirms that it has checked all the above figures and understands that neither the District nor any of its agents, employees or representatives shall be responsible for any errors or omissions on the part of the undersigned in preparing and submitting this Bid Form.

- The undersigned has reviewed the work outlined in the Informal Bid Documents and fully understands the scope of work required in this bid, understands the construction and project management function(s) as described in the Informal Bid Documents, and that each bidder who is awarded a contract shall be in fact a prime contractor, not a subcontractor, to the District, and agrees that its bid, if accepted by the District, will be the basis for the bidder to enter into a contract with the District in accordance with the intent of the Informal Bid Documents.

- The undersigned has notified the District and/or the District’s Construction Manager in writing of any discrepancies or omissions or of any doubt, questions, or ambiguities about the meaning of any of the Informal Bid Documents at least seventy two (72) hours prior to bid opening, and has contacted the District and/or Construction Manager before bid date to verify the issuance of any clarifying Addenda.
- The undersigned agrees to commence work under this Contract on the date established in the Informal Bid Documents and to complete all work within the time specified in the Informal Bid Documents.
- **By submitting this Bid Form and signing below, the liquidated damages clause of the Agreement is hereby acknowledged.**
- The undersigned acknowledges that **five percent (5%)** retention is required for this Project per Board resolution and agrees thereto.
- It is understood that the District reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of sixty (60) days.
- Receipt and acceptance of the following addenda is hereby acknowledged:

No.____, Dated _____	No.____, Dated _____
No.____, Dated _____	No.____, Dated _____

- The undersigned hereby certifies that bidder is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.
- The bidder represents that it is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the work that may create, during the work, unusual or peculiar unsafe conditions hazardous to persons and property.
- Bidder expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the work with respect to such hazards.
- Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms “claim” and “knowingly” are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), the District will be entitled to civil

remedies set forth in the California False Claim Act. It may also be considered fraud and the bidder may be subject to criminal prosecution.

- The undersigned bidder certifies that it is, and shall be throughout the period of the contract, licensed by the State of California to do the type of work required under the terms of the Informal Bid Documents. Bidder further certifies that it is regularly engaged in the general class and type of work called for in the Informal Bid Documents.

**Furthermore, bidder hereby certifies to the District that all representations, certifications, and statements made by bidder, as set forth in this bid form, are true and correct and are made under penalty of perjury.**

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2021

Name of Bidder

\_\_\_\_\_

Type of Entity [Corp., LLC, etc.]

\_\_\_\_\_

**Signature of Bidder**

\_\_\_\_\_

Title of Signer

\_\_\_\_\_

Address of Bidder

\_\_\_\_\_

Taxpayer's Identification No. of Bidder

\_\_\_\_\_

Telephone Number \_\_\_\_\_

Fax Number \_\_\_\_\_

E-mail \_\_\_\_\_

Web page \_\_\_\_\_

Contractor's License No(s): No. \_\_\_\_\_ Class: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

No.: \_\_\_\_\_ Class: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

No.: \_\_\_\_\_ Class: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Required Contractors' DIR Registration No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

If bidder is a corporation, affix corporate seal.

Name of Corporation: \_\_\_\_\_

President: \_\_\_\_\_

Secretary: \_\_\_\_\_

Treasurer: \_\_\_\_\_

Manager: \_\_\_\_\_

**DESIGNATED SUBCONTRACTORS LIST**  
**TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID**

**INFORMAL BID NO. 2022-001**  
**MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

**Bidder Qualifications:** Bidders wishing to bid as a prime contractor and/or work on selected trades on this Project must have registered with District to be added to the District’s Informal Bidding List prior to the release of Bid.

Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., it must clearly set forth below the name and location of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work in an amount in excess of one-half of one percent (0.5%) of bidder’s total bid and the kind of work that each will perform. Furthermore, bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., if bidder fails to list as to any portion of work, or if bidder lists more than one subcontractor to perform the same portion of work (i.e. bidder must indicate what portion of the work each subcontractor will perform), bidder must perform that portion itself or be subjected to penalty under applicable law.

If alternate bids are called for and bidder intends to use subcontractors different from or in addition to those subcontractors listed for work under the base bid, bidder must list subcontractors that will perform work in an amount in excess of one half of one percent (0.5%) of bidder’s total bid, including alternates.

In case more than one subcontractor is named for the same kind of work, state the portion of work that each subcontractor will perform. Bidders or suppliers of materials only do not need to be listed. If further space is required for the list of proposed subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of this document.

All subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with the California Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project.

<b>Subcontractor Name:</b> <b>Email:</b>	Location:
Portion of Work:	
Contractor’s License No.:	Expiration date:
Bid Amount*:	
DIR Registration No.*:	

<b>Subcontractor Name:</b> <b>Email:</b>	Location:
Portion of Work:	
Contractor's License No.:	Expiration date:
Bid Amount*:	
DIR Registration No.*:	
<b>Subcontractor Name:</b> <b>Email:</b>	Location:
Portion of Work:	
Contractor's License No.:	Expiration date:
Bid Amount*:	
DIR Registration No.*:	
<b>Subcontractor Name:</b> <b>Email:</b>	Location:
Portion of Work:	
Contractor's License No.:	Expiration date:
Bid Amount*:	
DIR Registration No.*:	
<b>Legal Name of Bidder:</b>	
<b>Signature:</b>	<b>Date:</b>
<b>Print Name:</b>	
<b>Title:</b>	

\* This information must be provided at the time of submission of bid or must be provided within 24 hours after the time set for the opening of bids. Bidders who choose to provide this information within 24 hours after the time set for the opening of bids are solely responsible to ensure the District receives this information in a timely manner. The District is not responsible for any problems or delays associated with emails, faxes, delivery, etc. Absent a verified fax or email receipt date and time by the District, the District's determination of whether the information was received timely shall govern and be determinative. Bidder shall not revise or amend any other information in this form submitted at the time of bid. The information submitted at the time of bid shall govern over any conflicts, discrepancies, ambiguities or other differences in any subsequent Designated Subcontractors List submitted by the bidder.

**Acknowledgement and Acceptance of Guarantee**

I am aware of the provisions of the Agreement which requires Guarantee and Warranty of products and services provided as described in the attached Guarantee document, and I will comply with such provision as a requirement of the performance of the work of this contract.

Proper Name of Bidder

\_\_\_\_\_

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

## GUARANTEE

District: MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT

Project Name: MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS

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

The Contractor hereby warrants and guarantees to the District that all work, materials, equipment and workmanship provided, furnished or installed by or on behalf of Contractor in connection with the above-referenced Project (the "Work") have been provided, furnished and installed in strict conformity with the Contract Documents for the Work, including without limitation, the Drawings and the Specifications. Contractor further warrants and guarantees that all work, materials, equipment and workmanship as provided, furnished and/or installed are fit for use as specified and fulfill all applicable requirements of the Contract Documents including without limitation, the Drawings and the Specifications. Contractor shall, at its sole cost and expense, repair, correct and/or replace any or all of the work, materials, equipment and/or workmanship of the Work, together with any other items which may be affected by any such repairs, corrections or replacement, that may be unfit for use as specified or defective within a period of one (1) year from the date of the District's Final Acceptance of Work, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of the Contractor's failure and/or refusal to comply with the provisions of this Guarantee, within the period of time set forth in the Contract Documents after the District's issuance of the Notice to the Contractor of any defect(s) in the Work, materials, equipment or workmanship, Contractor authorized the District, without further notice to Contractor, to repair, correct and/or replace any such defective item at the expense of the Contractor. The Contractor shall reimburse the District for all costs, expenses or fees incurred by the District in providing or performing such repairs, corrections or replacements within ten (10) days of the District's presentation of a demand to the Contractor for the same.

The provisions of this Guarantee and the provisions of the Contract Documents for the Work relating to the Contractor's Guarantee(s) and warranty(ies) relating to the Work shall be binding upon the Contractor's Performance Bond Surety and all successors or assigns of Contractor and/or Contractor's Performance Bond Surety.

The provisions of this Guarantee are in addition to, and not in lieu of, any provisions of the Contract Documents for the Work relating to the Contractor's guarantee(s) and warranty(ies) or any guarantee(s) or warranty(ies) provided by any material supplier or manufacturer of any equipment, materials or other items forming a part of, or incorporated into the Work, or any other guarantee or warranty obligation of the Contractor, prescribed, implied or imposed by law.

The undersigned individual executing this Guarantee on behalf of Contractor warrants and represents that he/she is duly authorized to execute this Guarantee on behalf of Contractor and to bind Contractor to each and every provision hereof.

Dated: \_\_\_\_\_ By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Typewritten or Handwritten Name)

\_\_\_\_\_

**NON-COLLUSION DECLARATION**

**TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID**  
**Public Contract Code Section 7106**

**INFORMAL BID NO. 2022-001**  
**MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, the party making the foregoing bid (“Bidder”). The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder. All statements contained in the bid are true. The Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

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

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on \_\_\_\_\_[date], at \_\_\_\_\_[city], \_\_\_\_\_[state].”

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

Legal Name of Bidder: \_\_\_\_\_

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

Print Name: \_\_\_\_\_

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

**REQUEST FOR SUBSTITUTION AT TIME OF BID**

Pursuant to Public Contract Code section 3400, bidder submits the following request to Substitute with the bid that is submitted. I understand that if the request to substitute is not an “or equal” or is not accepted by District and I answer “no” I will not provide the specified item, then I will be held non-responsive and my bid will be rejected. With this understanding, I hereby request Substitution of the following articles, devices, equipment, products, materials, fixtures, patented processes, forms, methods, or types of construction:

	Specification Section	Specified Item	Requested Substituted Item	Contractor Agrees to Provide Specified Item if request to Substitute is Denied <sup>1</sup> (circle one)		District Decision (circle one)	
				Yes	No	Grant	Deny
1.				Yes	No	Grant	Deny
2.				Yes	No	Grant	Deny
3.				Yes	No	Grant	Deny
4.				Yes	No	Grant	Deny
5.				Yes	No	Grant	Deny
6.				Yes	No	Grant	Deny
7.				Yes	No	Grant	Deny
8.				Yes	No	Grant	Deny
9.				Yes	No	Grant	Deny
10.				Yes	No	Grant	Deny
11.				Yes	No	Grant	Deny

---

This Request Form must be accompanied by evidence as to whether the proposed Substitution (1) is equal in quality, service, and ability to the Specified Item; (2) will entail no change in detail, construction, and scheduling of related work; (3) will be acceptable in consideration of the required design and artistic effect; (4) will provide no cost disadvantage to the District; (5) will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; (6) will require no change of the construction schedule or milestones for the Project; and, (7) Contractor agrees to pay for any DSA Fees or other Governmental Plan check costs associated with this Substitution Request. (See General Conditions Section 3.6)

<sup>1</sup> Bidder must state whether bidder will provide the Specified Item in the event the Substitution request is evaluate and denied. If bidder states that bidder will not provide the Specified Item the denial of a request to Substitute shall result in the rejection of the bidder as non-responsive. However, if bidder states that bidder will provide the Specified Item in the event that bidder's request for Substitution is denied, bidder shall execute the Agreement and provide the Specified Item(s). If bidder refuses to execute the Agreement due to the District's decision to require the Specified Item(s) at no additional cost, bidder's Bid Bond shall be forfeited.

The undersigned states that the following paragraphs are correct:

1. The proposed Substitution does not affect the dimensions shown on the Drawings.
2. The undersigned will pay for changes to the building design, including Architect, engineering, or other consultant design, detailing, DSA plan check or other governmental plan check costs, and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse effect on other trades, the Contract Time, or specified warranty requirements.
4. Maintenance and service parts will be available locally for the proposed substitution.
5. In order for the Architect to properly review the substitution request, within five (5) days following the opening of bids, the Contractor shall provide samples, test criteria, manufacturer information, and any other documents requested by Architect or Architect's engineers or consultants, including the submissions that would ordinarily be required under Article 3.7 for Shop Drawings along with a document which provides a side by side comparison of key characteristics and performance criteria (often known as a CSI side by side comparison chart).
6. If Substitution Request is accepted by the District, Contractor is still required to provide a Submittal for the substituted item pursuant to Article 3.7 and shall provide required Schedule information (including schedule fragnets, if applicable) for the substituted item as required under Article 8.3.2.1. The approval of the Architect, Engineer, or District of the substitution request does not mean that the Contractor is relieved of Contractor's responsibilities for Submittals, Shop Drawings, and schedules under Article 3.7 and 8.3.2 if the Contractor is awarded the Project.

Name of Bidder: \_\_\_\_\_

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

District: \_\_\_\_\_

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

**ACKNOWLEDGMENT OF BIDDING PRACTICES REGARDING INDEMNITY FORM**

TO: Mt. San Jacinto Community College District

RE: Project Number \_\_\_\_\_

Construction Contract for \_\_\_\_\_

Please be advised that with respect to the above-referenced Project the undersigned Contractor on behalf of itself and all subcontractors hereby waives the benefits and protection of Labor Code section 3864, which provides:

“If an action as provided in this chapter is prosecuted by the employee, the employer, or both jointly against the third person results in judgment against such third person, the employer shall have no liability to reimburse or hold such third person harmless on such judgment or settlement in the absence of a written agreement to do so executed prior to the injury.”

This Agreement has been signed by an authorized representative of the contracting party and shall be binding upon its successors and assignees. The undersigned further agrees to promptly notify the District of any changes of ownership of the contracting party or any subcontractor while this Agreement is in force.

\_\_\_\_\_  
Contracting Party

\_\_\_\_\_  
Name of Agent/Title

**WORKERS' COMPENSATION CERTIFICATION**

Labor Code section 3700 in relevant part provides:

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

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

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

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

Legal Name of Contractor: \_\_\_\_\_

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

Print Name: \_\_\_\_\_

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

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

**CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE WORKPLACE**

Mt. San Jacinto Community College District

Project Name: **INFORMAL BID NO. 2022-001 MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

This Drug-Free Workplace Certification form is required from all successful bidders pursuant to the requirements mandated by Government Code Sections 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any State agency must certify that it will provide a drug-free workplace by performing certain specified acts. In addition, the Act provides that each contract or grant awarded by a State agency may be subject to suspension of payments or termination of the contract or grant, and the Contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

Pursuant to Government Code Section 8355, every person or organization awarded a contract or grant from a State agency shall certify that it will provide a drug-free workplace by doing all of the following:

Publishing a statement, notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace, and specifying actions which will be taken against employees for violations of the prohibition.

Establishing a drug-free awareness program to inform employees about all of the following:

- a. The dangers of drug abuse in the workplace;
- b. The person's or organization's policy of maintaining a drug-free workplace;
- c. The availability of drug counseling, rehabilitation and employee-assistance programs; and
- d. The penalties that may be imposed upon employees for drug abuse violations;

Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code Section 8355 listed above and will (a) publish a statement notifying employees concerning the prohibition of controlled substance at the workplace, (b) establish a drug-free awareness program, and (c) require each employee engaged in the performance of the contract be given a copy of the statement required by section 8355(a) and require such employee agree to abide by the terms of that statement.

I also understand that if the Mt. San Jacinto Community College District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355, that the contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Sections 8350 et seq.

I acknowledge that I am aware of the provisions of Government Code Sections 8350 et seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

\_\_\_\_\_  
Company's Name

\_\_\_\_\_  
Authorized Representative Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**CONTRACTOR’S CERTIFICATE REGARDING ALCOHOLIC BEVERAGE AND  
TOBACCO-FREE CAMPUS POLICY**

**Mt. San Jacinto Community College District**

Project Name: **INFORMAL BID NO. 2022-001 MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

The Contractor agrees that it will abide by and implement the Mt. San Jacinto Community College’s Alcoholic Beverage and Tobacco-Free Campus Policy, which prohibits the use of alcoholic beverages and tobacco products, of any kind and at any time, on District-owned or leased buildings, on DISTRICT property and in DISTRICT vehicles. The Contractor shall procure signs stating “ALCOHOLIC BEVERAGE AND TOBACCO USE IS PROHIBITED” and shall ensure that these signs are prominently displayed in all entrances to District property at all times.

\_\_\_\_\_  
Company’s Name

\_\_\_\_\_  
Authorized Representative Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) PARTICIPATION STATEMENT**

Each bidder must complete this form in order to comply with the Mt. San Jacinto Community College District ("District") policy for participation of disabled veteran business enterprises.

Project Name: \_\_\_\_\_

Bid No.: \_\_\_\_\_

DSA No.: \_\_\_\_\_

The undersigned, on behalf of the Contractor named below, certifies that the Contractor has made reasonable efforts to secure participation by DVBE in the Contract to be awarded for the above-referenced Bid No., including participation by DVBE subcontractors and/or material suppliers. **Check only one of the following:**

The Contractor was unable after reasonable efforts to secure DVBE participation in the Contract for the above-referenced Project/Bid No. However, the Contractor will use DVBE services if the opportunity arises at any time during construction of the Project. Upon completion of the Project, the Contractor will report to the District the total dollar amount of DVBE participation in any Contract awarded to Contractor, and in any change orders, for the above-referenced Project.

The Contractor has secured DVBE participation in the Contract for the above referenced Project/Bid No., and anticipates that such DVBE participation will equal approximately \_\_\_\_\_ dollars (\$ \_\_\_\_\_), which represents approximately \_\_\_\_\_ percent (\_\_\_%) of the total Contract for such Project. Upon completion of the Project, Contractor will report to the District the actual total dollar amount of DVBE participation in the Contract awarded to Contractor, and in any change orders, for such Project

Company: \_\_\_\_\_

Name: \_\_\_\_\_

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

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

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

**HOLD HARMLESS AGREEMENT**

The Vendor agrees to and does hereby indemnify and hold harmless the DISTRICT, its officers, agents, and employees from every claim or demand made, and every liability, loss, damages, or expense, or any nature whatsoever, which may be incurred by reason of:

Liability for damages for (1) death or bodily injury to persons, (2) injury to, loss or theft of property, or (3) any other loss, damage or expense arising under either (1) or (2) above, sustained by the Vendor or any person, firm or corporation employed by the Vendor upon or in connection with the work called for in this Agreement, except for liability resulting from the sole negligence, willful misconduct, or active negligence of the DISTRICT, its officers, employees, agents or independent vendors who are directly employed by the DISTRICT; and

Any injury to or death of persons or damage to property caused by any act, neglect, default or omission of the Vendor, or any person, firm, or corporation employed by the Vendor, either directly or by independent contract, including all damages due to loss or theft, sustained by any person, firm or corporation, including the DISTRICT, arising out of, or in any way connected with the work covered by this agreement, whether said injury or damage occurs either on or off school DISTRICT property, if the liability arose from the negligence or willful misconduct of anyone employed by the Vendor, either directly or by independent contract.

The Vendor, at his own expense, cost, and risk, shall defend any and all actions, suits, or other proceedings that may be brought or instituted against the DISTRICT, its officers, agents or employees, on any such claim, demand or liability, and shall pay or satisfy any judgment that may be rendered against the DISTRICT, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

SUBMITTED BY:

COMPANY \_\_\_\_\_

SIGNATURE \_\_\_\_\_ SIGNATURE \_\_\_\_\_

NAME \_\_\_\_\_ NAME \_\_\_\_\_

TITLE \_\_\_\_\_ TITLE \_\_\_\_\_

DATE \_\_\_\_\_ DATE \_\_\_\_\_

*In accordance with the Corporations Code of California, any contract entered into by any corporation with Mt. San Jacinto Community College District shall be signed by two officers of the corporation: the president/CEO or any vice president AND the secretary or the treasurer/CFO or any assistant treasurer. If bidder is a corporation, and signer is not an officer, attach certified copy of by-laws or resolution authorizing execution. If bidder is a corporation, affix corporate seal. If signer is an agent, attach power of attorney. If bidder is not an individual, list names of other persons authorized to bind the organization.*

**PREVAILING WAGE CERTIFICATION**

**INFORMAL BID NO. 2022-001  
MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hours' notice, payroll records, and apprentice and trainee employment requirements, for all Services on the above Project.

I hereby certify that I and all my subcontractors of any tier will be properly registered with the Department of Industrial Relations in accordance with Labor Code section 1725.5 at all times during performance of the Work.

I hereby certify that I and all my subcontractors (of any tier) shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4 on at least on a monthly basis (or more frequently if required by the District or the Labor Commissioner) and in a format prescribed by the Labor Commissioner.

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

Legal Name of Contractor: \_\_\_\_\_

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

Print Name: \_\_\_\_\_

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

**BID BOND**

**INFORMAL BID NO. 2022-001  
MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS**

**(Note: If Bidder is providing a bid bond as its bid security, Bidder must use this form, NOT a surety company form.)**

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned, \_\_\_\_\_ as Principal (“Principal”),  
and \_\_\_\_\_ as Surety (“Surety”),  
a corporation organized and existing under and by virtue of the laws of the  
State of \_\_\_\_\_ and authorized to do business as a surety in the State of California,  
are held and firmly bound unto the MT. SAN JACINTO COMMUNITY COLLEGE  
DISTRICT (“District”) of Riverside County, State of California as Obligee, in the sum of  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

lawful money of the United States of America, for the payment of which sum well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to the District for all work specifically described in the accompanying bid;

NOW, THEREFORE, if the Principal is awarded the Project and, within the time and manner required under the Informal Bid Documents, after the prescribed forms are presented to Principal for signature, enters into a written contract (“Agreement”), in the prescribed form in accordance with the bid, and files two bonds, one guaranteeing faithful performance and the other guaranteeing payment for labor and materials as required by law, and meets all other conditions to the contract between the Principal and the Obligee becoming effective, or if the Principal shall fully reimburse and save harmless the Obligee from any damage sustained by the Obligee through failure of the Principal to enter into the Agreement and to file the required performance and labor and material bonds, and to meet all other conditions to the Agreement between the Principal and the Obligee becoming effective, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. The full payment of the sum stated above shall be due immediately if Principal fails to execute the Agreement within seven (7) days of the date of the District's Notice of Award to Principal.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or the call for bids, or to the work to be performed thereunder, or the specifications accompanying the same, shall in any way affect its obligation under this bond, and it does hereby waive notice of any such change, extension of

time, alteration or addition to the terms of the Agreement or the call for bids, or to the work, or to the specifications.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorneys' fee to be fixed by the Court.

If the District awards the bid, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (90) days after the date of the bid opening.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety above named, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

(Affix Corporate Seal)

\_\_\_\_\_  
Principal

\_\_\_\_\_  
By \_\_\_\_\_

\_\_\_\_\_  
Print Name and Title of Signatory

(Affix Corporate Seal)

\_\_\_\_\_  
Surety

\_\_\_\_\_  
By \_\_\_\_\_

\_\_\_\_\_  
Name of California Agent of Surety

\_\_\_\_\_  
Address of California Agent of Surety

\_\_\_\_\_  
Telephone Number of California Agent of Surety

**Bidder must attach Power of Attorney and Certificate of Authority for Surety and a Notarial Acknowledgment for all Surety's signatures. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.**

[End of Bid Documents to be Submitted with Bid]

**THE FOLLOWING SECTION CONTAINS DOCUMENTS TO BE  
RETURNED BY BIDDERS IF AWARDED A CONTRACT**

- **SERVICES AGREEMENT**
- **PAYMENT BOND**
- **PERFORMANCE BOND**

**CONSTRUCTION SERVICES AGREEMENT FORM**

THIS AGREEMENT, entered into this \_\_\_\_\_ day of \_\_\_\_\_ in the year 2021 in the County of Riverside of the State of California, by and between the **MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT**, hereinafter called the “DISTRICT”, and \_\_\_\_\_ hereinafter called the “CONTRACTOR”.

WITNESSETH that the DISTRICT and the CONTRACTOR, for the consideration stated herein, agree as follows:

**ARTICLE I - SCOPE OF WORK**

1.1 Description of Work: The CONTRACTOR shall furnish all labor, materials, equipment, tools, and utility and transportation services, and perform and complete all work required in connection with the following construction, reconstruction, erection, alteration, renovation, improvement, demolition and/or repair work for the following: **BID NO. 2022-001 MAKERSPACE CONVERSION PROJECT AT THE SAN JACINTO CAMPUS** (hereinafter called the “PROJECT”), as further described in CONTRACTOR’s Scope of Work, attached as Attachment “A”, if any.

(a) The CONTRACTOR shall be responsible for cutting, fitting, or patching to complete the work and to make all parts fit together properly. When modifying existing work or installing new work adjacent to existing work, CONTRACTOR shall match, as closely as conditions of Site and materials will allow, the finishes, textures, and colors of the original work, refinishing existing work at no additional cost to DISTRICT. All costs caused by defective or ill-timed work shall be borne by CONTRACTOR. CONTRACTOR shall be solely responsible for protecting existing work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

(b) CONTRACTOR at all times shall keep premises free from debris such as waste, dust, excess water, storm water runoffs, rubbish, and excess materials and equipment. CONTRACTOR shall not leave debris under, in, or about the premises, but shall promptly remove same from the premises and dispose of it in a lawful manner. Upon completion of work, CONTRACTOR shall clean interior and exterior of buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected, so surfaces are free from foreign material or discoloration; CONTRACTOR shall clean and polish all glass, plumbing fixtures, equipment, finish hardware and similar finish surfaces. Upon completion of the work, CONTRACTOR shall also remove temporary utilities, fencing, barricades, planking, sanitary facilities and similar temporary facilities from site. CONTRACTOR shall remove rubbish and debris resulting from the work on a daily basis. CONTRACTOR shall maintain the structures and site in a clean and orderly condition at all times until acceptance of the PROJECT by the DISTRICT. CONTRACTOR shall keep its access driveways and adjacent streets, sidewalks, gutters and drains free of rubbish, debris and excess water by cleaning and removal each day.

1.2 CONTRACTOR’s Certifications, Representations and Warranties: CONTRACTOR makes the following certifications, representations, and warranties for the benefit of the DISTRICT and CONTRACTOR acknowledges and agrees that the DISTRICT, in deciding to engage CONTRACTOR pursuant to this Agreement, is relying upon the truth and validity of the following certifications, representations and warranties and their effectiveness throughout the term of this Agreement and the course of CONTRACTOR’s engagement hereunder:

(a) CONTRACTOR is qualified in all respects to provide to the DISTRICT all of the services contemplated by this Agreement and, to the extent required by any applicable laws, CONTRACTOR has all such licenses and/or governmental approvals as would be required to carry out and perform for the benefit of the DISTRICT, such services as are called for hereunder.

(b) CONTRACTOR, in providing the services and in otherwise carrying out its obligations to the DISTRICT under this Agreement, shall, at all times, comply with all applicable federal, state, and local laws, rules, regulations, and ordinances, including worker’s compensation and equal protection and non- discrimination laws.

1.3 If necessary, the DISTRICT shall employ one or more project inspectors approved by the Division of the State Architect (“DSA”). The Inspector(s) shall be assigned to the work in accordance with the requirements of Title

24 of the California Code of Regulations. The Inspector(s) duties are as specifically defined in Title 24.

(a) If applicable, CONTRACTOR's work shall be under the observation of the Project Inspector. The Inspector shall have free access to any or all parts of the work at any time. The CONTRACTOR shall furnish the Inspector such information as may be necessary to keep the Inspector fully informed regarding progress and manner of work and character of materials. Such observations shall not, in any way, relieve the CONTRACTOR from responsibility for full compliance with all terms and conditions of the Contract, or be construed to lessen to any degree the CONTRACTOR's responsibility for providing efficient and capable superintendence. The Inspector is not authorized to make changes in any drawings or specifications approved by the DISTRICT and/or DSA for the PROJECT nor shall the Inspector's approval of the work and methods relieve the CONTRACTOR of responsibility for the correction of subsequently discovered defects, or from its obligation to comply with the Contract Documents.

(b) The Inspector shall have the authority to reject work whenever provisions of the Contract are not being complied with, and CONTRACTOR shall immediately address and rectify all rejected work. In addition, the Inspector may stop any work that poses a probable risk of harm to persons or property. The CONTRACTOR shall instruct its employees, subcontractors, material and equipment suppliers, etc., accordingly. The absence of any Stop Work order or rejection of any portion of the work shall not relieve the CONTRACTOR from any of its obligations pursuant to the Contract.

(c) CONTRACTOR shall establish a protocol for requesting inspection with Inspector so as to not delay the Work and provide adequate time for the Inspector to perform inspection. If such a protocol is not established ahead of time, Inspector may utilize the time criteria set by Title 24 of 48 hours in advance of submitting form DSA 156 for each new area. DSA requirements under PR 13-01 specifically give the Special Inspector fourteen (14) days to post to the DSA website. CONTRACTOR is responsible for delays and for failure to plan. For some Projects, there may be a need to incrementally install certain assemblies. It is up to CONTRACTOR to identify areas and assemblies that may be constructed incrementally. CONTRACTOR must identify and establish incremental areas of construction and establish protocols with Inspector for DSA 152 approvals so they may be presented to DSA. See PR-13-01 for further discussion.

(d) CONTRACTOR is required to meet all DSA inspection requirements and specifically the requirements related to the DSA 152 Inspection Card. To help CONTRACTOR plan its operations, CONTRACTOR is directed to study the current version of the DSA 152 Inspection Card Manual identifying the exact steps the Inspector is to follow in the review and sign off process for the DSA 152. The DSA 152 Inspection Card Manual provides specific detail as to the order of operations, review items and compliance items beyond the Specifications and Plans which are reviewed for DSA compliance. The most current version of this manual is located at <http://www.documents.dgs.ca.gov/dsa/forms>. CONTRACTOR is also specifically directed to the time periods for posting of Special Inspection Reports and Inspector Notifications under DSA PR 13-01 since the timing of Inspection shall not be considered a governmental entity related delay. Any references to any DSA forms, documents or requirements herein shall be construed to incorporate any updates, supplements, or additions created by DSA. CONTRACTOR shall be required to meet the latest DSA requirements applicable to the Project throughout the Project.

(e) If necessary, it is the CONTRACTOR's responsibility to request special inspections with sufficient time so all testing may be timely completed and posted so work may proceed and the Inspector's signature is attached to the Project Inspection Card (Form 152). As applicable, CONTRACTOR must make timely requests for special inspection under the DSA Verified Report Forms 291 (laboratory), DSA Verified Report Form 292 (Special Inspection), and DSA Verified Report 293 (geotechnical) since DSA requirements under PR 13-01 specifically gives the Special Inspections 14 days to post to the DSA website.

(f) Inspector shall electronically post DSA required documents on the DSA electronic posting website. It is the CONTRACTOR's responsibility to determine the status of posting and determine if all the criteria for sign off of a category of Work on the Project Inspection Card (Form DSA 152) as defined more thoroughly in the most current version of the DSA 152 manual posted on the DSA website. Inspector may collaborate with CONTRACTOR about approval of areas that may be constructed and approved incrementally under the DSA 152 card pursuant to the guidelines of PR-13. Inspector shall work with CONTRACTOR to present incremental approval proposals to DSA.

(g) DSA may issue a Stop Work Order, or an Order to Comply, when either 1) the work proceeds without DSA approval; 2) the work proceeds without a DSA Inspector of Record, or 3) where DSA determines that the Work is not being performed in accordance with applicable rules and regulations, and would compromise the structural integrity of the Project or would endanger lives. If a Stop Work Order is issued, the Work in the affected area shall cease until DSA withdraws the Stop Work Order. Pursuant to Education Code Section 81133.5, the DISTRICT shall not be held liable in any action filed against the DISTRICT for any delays caused by compliance with the Stop Work Order, except to the extent that an error or omission by the DISTRICT is the basis for the issuance of the Stop Work Order. Examples of Stop Work Orders that may be issued by DSA include DSA Bulletin 07-04 and Policy 10-01, the installation of Automatic Fire Sprinkler Systems without approved Plans, covering Work that has not been approved by Inspector on DSA Project Inspection Card (Form 152).

1.4 Unless personally present on the PROJECT site where the work is being performed, the CONTRACTOR shall keep on the work at all times during its progress a competent construction Superintendent satisfactory to the DISTRICT. The Superintendent shall be present on a full-time basis, shall be dedicated exclusively to the PROJECT and shall not share superintendency duties with another project or job. The Superintendent shall not be replaced except with written consent of the DISTRICT. The Superintendent shall represent the CONTRACTOR in its absence and shall be fully authorized to receive and fulfill any instruction from the Architect, the Inspector, the DISTRICT or any other DISTRICT representative. All Requests for Information shall be originated by the Superintendent and responses thereto shall be given to the Superintendent. No work shall begin on any day by any Subcontractor or other person on the PROJECT site until the Superintendent has arrived, or shall any work continue during the day after the Superintendent has departed from the PROJECT site. The Superintendent shall have authority to bind CONTRACTOR through the Superintendent's acts. The Superintendent shall represent the CONTRACTOR, and communications given to the Superintendent shall be binding on the CONTRACTOR. Before commencing the work, CONTRACTOR shall give written notice to DISTRICT and Architect (if applicable) of the name and a Statement of Qualifications of such superintendent. Superintendent shall not be changed except with written consent of DISTRICT, unless a superintendent proves to be unsatisfactory to CONTRACTOR and ceases to be in its employ, in which case, CONTRACTOR shall notify DISTRICT in writing. CONTRACTOR shall provide a replacement superintendent approved by the DISTRICT prior to performing additional work. DISTRICT shall have the right, but not the obligation, to require the removal from the PROJECT of any superintendent, staff member, agent, or employee of any CONTRACTOR, Subcontractor, material, or equipment supplier.

## **ARTICLE 2 - TIME OF COMPLETION**

The CONTRACTOR shall complete all work under this Agreement within **fifty-three (53) Calendar Days** from receipt of the Notice to Proceed from the DISTRICT. It is expressly understood that time is of the essence. Substantial Completion is not reached unless and until each of the following three (3) conditions have been met: 1) all contractually required items have been installed with the exception of only minor and Incomplete Punch Items (See Article 9); 2) All Fire/Life Safety Systems have been installed, and are working and signed off on the DSA Form 152 Inspection Card, if applicable, all building systems including mechanical, electrical and plumbing are all functioning; and 3) the Project is fit for occupancy and its intended use. Final Completion means that all Work in the Contract Documents is finished, the requirements of the Contract Documents have been met, the Project has been Closed Out, and all Work has ceased on the Project. In most cases, the recording of a Notice of Completion shall represent Completion of the Project.

Contractor shall provide a Critical Path Method (CPM) schedule upon request of the District within five (5) calendar days of issuance of the Notice to Proceed.

## **ARTICLE 3 - LIQUIDATED DAMAGES**

It being impracticable and infeasible to determine the amount of actual damage, it is agreed that the CONTRACTOR will pay the DISTRICT the sum of one thousand dollars (\$1,000) per calendar day for each and every day of delay beyond the time set forth in Article 2 of this Agreement for substantial completion as liquidated damages and not as a penalty or forfeiture. In the event the same is not paid, the CONTRACTOR further agrees that the DISTRICT may

deduct such amount thereof from any money due or that may become due the CONTRACTOR under the contract. This Article shall not be construed as preventing the DISTRICT from the recovery of damages under provisions of the Contract Documents.

#### **ARTICLE 4 - CONTRACT PRICE**

4.1 Contract Price. The DISTRICT shall pay to the CONTRACTOR as full consideration for the faithful performance of the contract, subject to any additions or deductions, the sum of one XXXX DOLLARS (\$ \_\_\_\_\_), said sum being the total amount stipulated by the parties.

#### 4.2 Cost Breakdown

(a) Required Information. Contractor shall furnish the following:

A. Within ten (10) days after Notice to Proceed, a detailed breakdown of the Contract Price (hereinafter "Schedule of Values") for each Project, Site, building, milestone or other meaningful method to measure the level of Project Completion as determined by the District shall be submitted as a Submittal for the Project;

B. Within ten (10) days after Notice to Proceed, a schedule of estimated monthly payment requests due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the District may require;

C. Within ten (10) days after Notice to Proceed, address, telephone number, telecopier number, California State Contractors License number, classification and monetary value of all Subcontracts for parties furnishing labor, material, or equipment for completion of the Project.

(b) Information and Preparation of Schedule of Values

A. Break Down of Schedule of Values. Schedule of Values shall be broken down by Project, site, building, milestone, or other meaningful method to measure the level of Project Completion as determined by the District.

B. Based on Contractor Bid Costs. The Schedule of Values shall be based on the costs from Contractor's bid to the District. However, the submission of the Schedule of Values shall not be front loaded so the Contractor is paid a greater value than the value of the Work actually performed and shall not shift funds from parts of the Project that are later to Work that is performed earlier.

C. Largest Dollar Value for Each Line Item. Identify subcontractors and materials suppliers proposed to provide portions of Work equal to or greater than ten thousand dollars (\$10,000) or one-half (1/2) of one percent (1%) of their Contract Price, whichever is less.

D. Allowances. Any Allowances provided for in the Contract shall be a line item in the Schedule of Values.

E. Labor and Materials Shall Be Separate. Labor and Materials shall be broken into two separate line items unless specifically agreed in writing by the District.

(c) District Approval Required

The District shall review all submissions received pursuant to Paragraph 9.2 in a timely manner. All submissions must be approved by the District before becoming the basis of any payment.

#### 4.3 Progress Payments

(a) Payments to Contractor. Contractor shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as certified by Architect and Inspector and verified by Contractor) up to the last day of the previous month, less the aggregate of previous payments. The value of the Work completed shall be the Contractor's best estimate. Work completed as estimated shall be an approximation or estimate only and no mistake, inaccuracy, error or falsification in said any approved estimate shall

operate to release the Contractor, or any surety upon any bond, from damages arising from such Work, or from the District's enforcement of each and every provision of this Contract including but not limited to the Performance Bond and Payment Bond. The District shall have the right to subsequently to correct any mistake, inaccuracy, error or falsification made or otherwise set forth in any approved Request for Payment and such correction may occur in any future Payment Application or in the Retention Payment to the Contractor. No Surety upon any bond shall be relieved, released or exonerated of its obligations under this Contract or any applicable bond when the District is unable to correct an overpayment to the Contractor due to any abandonment by the Contractor or termination by the District.

The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for Work performed, so long as any lawful or proper direction given by the District concerning the Work, or any portion thereof, remains incomplete.

Notwithstanding anything to the contrary stated above, the Contractor may include in its Request for Payment the value of any structural steel, glue laminated beams, trusses, bleachers and other such custom-made materials prepared specifically for the Project and unique to the Project so long as all of the following requirements are satisfied:

- A. The aggregate cost of materials stored off-site shall not exceed Fifteen Thousand Dollars (\$15,000) at any time or as otherwise agreed to be District in writing;
- B. Title to such materials shall be vested in the District as evidenced by documentation satisfactory in form and substance to the District, including, without limitation, recorded financing statements, UCC filings and UCC searches;
- C. With each Contractor Request for Payment, the Contractor shall submit to the District a written list identifying each location where materials are stored off-site (which must be a bonded warehouse) and the value of the materials at each location. The Contractor shall procure insurance satisfactory to the District (in its reasonable discretion) for materials stored off-site in an amount not less than the total value thereof;
- D. The consent of any Surety shall be obtained to the extent required prior to payment for any materials stored off-site;
- E. Representatives of the District shall have the right to make inspections of the storage areas at any time; and
- F. Such materials shall be 1) protected from diversion, destruction, theft and damage to the reasonable satisfaction of the District; 2) specifically marked for use on the Project; and 3) segregated from other materials at the storage facility.

(b) Purchase of Materials and Equipment and Cost Fluctuations

The Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to assure that there will be no delays. Contractor understands that materials fluctuate in value and shall have adequately addressed market fluctuations through agreements with Contractor Vendors or by other means. Contractor further understands and incorporates into Contractor's bid cost any wage rate increases during the Project for the Contractor's labor force as well as all other subcontractor and vendor labor forces. District shall not be responsible for market fluctuations in costs or labor rate increases during the Project. Contractor further has incorporated any and all cost increases in areas of Work where there may be schedule variations so that cost increases are not passed through to the District.

(c) No Waiver

No payment by District hereunder shall be interpreted so as to imply that District has inspected, approved, or accepted any part of the Work. Contractor specifically understands that Title 24 Section 4-343 that:

"It is the duty of the contractor to complete the work covered by his or her contract in accordance with the approved Plans and Specifications therefore. The contractor in no way is relieved of any

responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of such duties...In no case, however, shall the instruction of the Architect or registered Engineer be construed to cause work to be done with is not in conformity with the approved Plans, Specifications, and change orders.”

Notwithstanding any payment, the District may enforce each and every provision of this Contract which includes, but is not limited to, the Performance Bond and Payment Bond. The District may correct any error subsequent to any payment. In no event shall the Contractor or the Surety be released or exonerated from performance under this Contract when the District overpays the Contractor based upon any mistake, inaccuracy, error or falsification in any estimate that is included in any Request for Payment.

(d) Issuance of Certificate of Payment

The Architect shall, within seven (7) days after receipt of the Contractor’s Application for Payment, either approve such payment or notify the Contractor in writing of the Architect’s reasons for withholding approval in whole or in part as provided in Paragraph 4.6. The review of the Contractor’s Application for Payment by the Architect is based on the Architect’s observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the Architect’s knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. In some cases, the Architect may act upon or rely on the evaluation of the Work by the Inspector. This review of Payment Applications is sometimes called a “Pencil Draft.” District’s return of a Pencil Draft shall constitute the District’s dispute of the Pay Application that has been submitted. Contractor shall promptly respond to Pencil Drafts or Contractor’s Pay Applications may be delayed. Contractor’s failure to promptly respond to a Pencil Draft shall qualify as a delay in the Prompt Payment of a Request for Payment or Request for Retention. The foregoing representations are subject to 1) an evaluation of the Work for conformance with the Contract Documents, 2) results of subsequent tests and inspections, 3) minor deviations from the Contract Documents correctable prior to completion, and 4) specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute the Contractor’s Verified representation that the Contractor is entitled to payment in the amount certified.

(e) Payment of Undisputed Contract Payments

In accordance with Public Contract Code section 7100, payments by the District to the Contractor for any and all undisputed amounts (including all Progress Payments, Final Payments or Retention Payment) is contingent upon submission of a proper and accurate Pay Application and the Contractor furnishing the District with a release of all Claims against the District related to such undisputed amounts. Disputed Contract claims in stated amounts may be specifically excluded by the Contractor from the operation of the release. If, however, the Contractor specifically excludes any Claims, the Contractor shall provide details such as a specific number of disputed days or costs of any such exclusion.

4.4 Applications for Progress Payments

(a) Procedure

F. Application for Progress. On or before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the Architect an itemized Application for Progress Payment for operations completed. Such application shall be supported by the following or such portion thereof as Architect requires:

- i. The amount paid to the date of the Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;
- ii. The amount being requested under the Application for Payment by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;
- iii. The balance that will be due to each of such entities after said payment is made;
- iv. A certification that the As-Built Drawings and Annotated Specifications are current;
- v. Itemized breakdown of Work done for the purpose of requesting partial payment;

- vi. An updated construction schedule in conformance with Article 2;
  - vii. Failure to submit a schedule update for the month or any previous month
  - viii. The additions to and subtractions from the Contract Price and Contract Time;
  - ix. A summary of the Retention held;
  - x. Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;
  - xi. The percentage of completion of the Contractor's Work by line item; and
  - xii. An updated Schedule of Values from the preceding Application for Payment.
  - xiii. Prerequisites for Progress Payments
- G. First Payment Request. The following items, if applicable, must be completed before the first payment request will be accepted for processing:
- i. Installation of the Project sign;
  - ii. Receipt by Architect of Submittals;
  - iii. Installation of field office;
  - iv. Installation of temporary facilities and fencing;
  - v. Submission of documents listed in the Paragraph 4.2 relating to Cost Breakdown;
  - vi. Preliminary schedule analysis, due within seven (7) days after Notice to Proceed;
  - vii. Contractor's Construction Schedule (Progress Schedule to be CPM based in conformance with Article 2);
  - viii. Schedule of unit prices, if applicable;
  - ix. Submittal Schedule;
  - x. Copies of necessary permits;
  - xi. Copies of authorizations and licenses from governing authorities;
  - xii. Initial progress report;
  - xiii. Surveyor qualifications;
  - xiv. Written acceptance of District's survey of rough grading, if applicable;
  - xv. List of all subcontractors, with names, license numbers, telephone numbers, and scope of work;
  - xvi. All bonds and insurance endorsements; and
  - xvii. Resumes of General Contractor's Project Manager, and if applicable, job site Secretary, Record Documents Recorder, and job site Superintendent.
- H. Second Payment Request. The second payment request will not be processed until all Submittals and Shop Drawings have been accepted for review by the Architect.
- I. All Payment Requests. No payment requests will be processed unless Contractor has submitted copies of the Certified Payroll records for the Work which correlates to the payment request and a proper CPM schedule pursuant to Article 2 is submitted.
- J. Final Pay Application (95%). See Article 9.4(c).

4.5 Warranty of Title. The CONTRACTOR warrants title to all work. The CONTRACTOR further warrants that all work is free and clear of liens, claims, security interests, or encumbrances in favor of the CONTRACTOR, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the PROJECT. Failure to keep work free of liens, stop notices, claims, security interests or encumbrances is grounds to make a claim against Contractor's Payment and Performance Bond to immediately remedy and defend.

If a lien or stop notice of any nature should at any time be filed against the PROJECT or any DISTRICT property, by any entity which has supplied material or services at the request of the CONTRACTOR, CONTRACTOR shall promptly, on demand by DISTRICT and at CONTRACTOR's and own expense, take any and all action necessary to cause any such lien or stop notice to be released or discharged immediately. If the CONTRACTOR fails to furnish to the DISTRICT within ten (10) calendar days after demand by the DISTRICT,

satisfactory evidence that a lien or stop notice has been so released, discharged, or secured, then DISTRICT may discharge such indebtedness and deduct the amount required, together with any and all losses, costs, damages, and attorney's fees and expense incurred or suffered by DISTRICT from any sum payable to CONTRACTOR under the Contract. In addition, any liens, stop notices, claims, security interests or encumbrances shall trigger the indemnification requirements under Article 5, and shall act as a trigger under Civil Code section 2778 and 2779 requiring reimbursement for any and all costs following the District's written demand has been made. Any withholdings by the District for stop notices in accordance with Civil Code section 9358 shall not be a basis by the Contractor to make a Claim for interest penalties under Public Contract Code sections 7107.

4.6 Reasons to Withhold Payment. The DISTRICT may withhold payment, in whole, or in part, to such extent as may be necessary to protect the DISTRICT from loss because of, but not limited to:

- (b) Defective work not remedied;
- (c) Stop notices served upon the DISTRICT;
- (d) Liquidated damages assessed against the CONTRACTOR;
- (e) Damage to the DISTRICT or other contractor;
- (f) Unsatisfactory prosecution of the work by the CONTRACTOR;
- (g) Failure of the CONTRACTOR to prosecute the work in a timely manner.
- (h) Failure to properly pay prevailing wages as defined in Labor Code section 1720, et seq.;
- (i) Failure to properly maintain or clean up the Site;
- (j) Payments to indemnify, defend, or hold harmless the DISTRICT;
- (k) If required, failure to obtain proper inspection and approval of the Project components as required by DSA and the Project Inspector demonstrated by an incomplete DSA Form 152 Inspection Care or a Notice of Deviation (DSA Form 154); or
- (l) Failure to pay Subcontractor or suppliers.

4.7 Nonconforming Work. If CONTRACTOR defaults or neglects to carry out the work required to complete the PROJECT or fails to perform any provision hereof, DISTRICT may, after ten (10) calendar days written notice to the CONTRACTOR and without prejudice to any other remedy make good such deficiencies. The DISTRICT shall adjust the total Contract price by reducing the amount thereof by the cost of making good such deficiencies. If DISTRICT deems it inexpedient to correct work which is damaged, defective, or not done in accordance with Contract provisions, an equitable reduction in the Contract price (of at least 150% of the estimated reasonable value of the nonconforming work) shall be made.

## **ARTICLE 5 - HOLD HARMLESS & INDEMNITY**

5.1 CONTRACTOR shall defend, indemnify and hold harmless DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under this Agreement or the Contract Documents. As part of this indemnity, CONTRACTOR shall protect and defend, at its own expense, DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from any legal action including attorney's fees or other proceeding based upon such act, omission, breach or as otherwise required by this Article.

5.2 Furthermore, CONTRACTOR agrees to and does hereby defend, indemnify and hold harmless DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorney's fees of any nature whatsoever, which may be incurred by reason of:

- (a) Liability for 1) death or bodily injury to persons; 2) damage or injury to, loss (including theft), or loss of use of, any property; 3) any failure or alleged failure to comply with any provision of law or the Contract Documents; or 4) any other loss, damage or expense, sustained by any person, firm or corporation

or in connection with the Work called for in this Agreement or the Contract Documents, except for liability resulting from the sole or active negligence, or the willful misconduct of the DISTRICT.

(b) Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of CONTRACTOR or any person, firm or corporation employed by CONTRACTOR, either directly or by independent contract, including all damages or injury to or death of persons, loss (including theft) or loss of use of any property, sustained by any person, firm or corporation, including the DISTRICT, arising out of or in any way connected with Work covered by this Agreement or the Contract Documents, whether said injury or damage occurs either on or off DISTRICT property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the DISTRICT.

(c) Any dispute between CONTRACTOR and CONTRACTOR's subcontractors/supplies/ Sureties, including, but not limited to, any failure or alleged failure of the CONTRACTOR (or any person hired or employed directly or indirectly by the CONTRACTOR) to pay any Subcontractor or Materialman of any tier or any other person employed in connection with the Work and/or filing of any stop notice or mechanic's lien claims.

CONTRACTOR, at its own expense, cost, and risk, shall defend any and all claims, actions, suits, or other proceedings that may be brought or instituted against the DISTRICT, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified herein Article 5 and shall pay or satisfy any judgment that may be rendered against the DISTRICT, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

CONTRACTOR's and Subcontractors' obligation to defend, indemnify and hold harmless the Owner, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors hereunder shall include, without limitation, any and all claims, damages, and costs for the following: (1) any damages or injury to or death of any person, and damage or injury to, loss (including theft), or loss of use of, any property; (2) breach of any warranty, express or implied; (3) failure of the CONTRACTOR or Subcontractors to comply with any applicable governmental law, rule, regulation, or other requirement; (4) products installed in or used in connection with the Work; and (5) any claims of violation of the Americans with Disabilities Act ("ADA")

5.3 The indemnity requirements described herein Article 5 is intended to apply during the period of CONTRACTOR's performance under this Contract and shall survive the expiration or termination of this Contract.

## **ARTICLE 6 - CONTRACTOR'S INSURANCE**

6.1 **Insurance Requirements.** Before the commencement of the work on the Project ("Work"), the CONTRACTOR shall purchase from and maintain in a company or companies lawfully authorized to do business in California with a financial rating of at least an A-VIII status as rated in the most recent edition of Best's Insurance Reports or as amended by the Supplementary General Conditions, such insurance as will protect the DISTRICT from claims set forth below, which may arise out of or result from the CONTRACTOR's Work under the Contract and for which the CONTRACTOR may be legally liable, whether such Work are by the CONTRACTOR, by a Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Any required insurance shall not contain any exclusion that applies to the type of work performed by the CONTRACTOR under the Contract Documents:

(a) Claims for damages because of bodily injury, sickness, disease, or death of any person DISTRICT would require indemnification and coverage for employee claim;

(b) Claims for damages insured by usual personal injury liability coverage, which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the CONTRACTOR or by another person;

(c) Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents;

(d) Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving

under their own power and engaged in the Work;

(e) Claims involving contractual liability applicable to the CONTRACTOR’s obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the CONTRACTOR and the Subcontractors; and

(f) Claims involving Completed Operations, Independent CONTRACTOR’s coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU)

(g) Claims involving sudden or accidental discharge of contaminants or pollutants.

6.2 Additional Insured Endorsement Requirements. The CONTRACTOR shall name, on any policy of insurance required under Article 6.1, the DISTRICT, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds. Subcontractors shall name the CONTRACTOR, the DISTRICT, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds. The Additional Insured Endorsement included on all such insurance policies shall be an ISO CG 20 10 (04/13), or an ISO CG 20 38 (04/13), or their equivalent as determined by the DISTRICT in its sole discretion, and must state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the additional insureds have other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. The insurance provided by the CONTRACTOR must be designated in the policy as primary to any insurance obtained by the DISTRICT. The amount of the insurer’s liability shall not be reduced by the existence of such other insurance.

6.3 Specific Insurance Requirements. CONTRACTOR shall take out and maintain and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain:

(A) General Liability Insurance. Comprehensive General Liability Insurance with a combined single limit per occurrence of not less than \$2,000,000.00 or Commercial General Liability Insurance which provides limits of not less than:

(a) Per occurrence (combined single limit)	.....	\$2,000,000.00
(b) Project Specific Aggregate (for this project only)	.....	\$2,000,000.00
(c) Products and Completed Operations	.....	\$2,000,000.00
(d) Personal and Advertising Injury Limit	.....	\$1,000,000.00

(B) Insurance Covering Special Hazards

The following Special hazards shall be covered by riders or riders to above mentioned public liability insurance or property damage insurance policy or policies of insurance, in amounts as follows:

(a) Automotive and truck where operated in amounts	.....	\$1,000,000.00
(b) Material Hoist where used in amounts	.....	\$1,000,000.00
(c) Explosion, Collapse and Underground (XCU coverage)	.....	\$1,000,000.00
(d) Hazardous Materials	.....	\$1,000,000.00

In addition, provide Excess Liability Insurance coverage in the amount of Four Million Dollars (\$4,000,000.00).

6.4 Workers’ Compensation Insurance. During the term of this Contract, the CONTRACTOR shall provide workers’ compensation and employer’s liability insurance for all of the CONTRACTOR’s employees engaged in Work under this Contract on or at the Site of the Project and, in case any of the CONTRACTOR’s Work is subcontracted, the CONTRACTOR shall require the Subcontractor to provide workers’ compensation insurance for all the Subcontractor’s employees engaged in Work under the subcontract. Any class of employee or employees not covered by a Subcontractor’s insurance shall be covered by the CONTRACTOR’s insurance. In case any class of employees engaged in Work under this Contract on or at the Site of the Project is not protected under the Workers’ Compensation laws, the

CONTRACTOR shall provide or cause a Subcontractor to provide insurance coverage for the protection of those

employees not otherwise protected. The CONTRACTOR shall file with the DISTRICT certificates of insurance as required under this Article and in compliance with Labor Code § 3700.

6.5 Fire Insurance. Before the commencement of the Work, the CONTRACTOR shall procure, maintain, and cause to be maintained at the CONTRACTOR's expense, fire insurance on all Work subject to loss or damage by fire. The amount of fire insurance shall be sufficient to protect the Project against loss or damage in full until the Work is accepted by the DISTRICT. This requirement may be waived upon confirmation by the DISTRICT that such coverage is provided under the Builder's Risk Insurance being provided.

6.6 Automobile Insurance. The DISTRICT, Architect and Inspectors, their directors, officers, employees, agents and volunteers shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the CONTRACTOR or for which the CONTRACTOR is responsible. Such insurance coverage shall be primary and non-contributory insurance as respects the DISTRICT, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the CONTRACTOR's scheduled underlying coverage. Any insurance or self-insurance maintained by the DISTRICT, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers shall be excess of the CONTRACTOR's insurance and shall not be called upon to contribute with it. The insurer shall agree to waive all rights of subrogation against the DISTRICT, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers for losses paid under the terms of the insurance policy that arise from Work performed by the CONTRACTOR. Insurance Services Office Business Auto Coverage Form Number CA 0001, Code 1 (any auto) is required. Comprehensive Automobile Liability insurance to include all autos, owned, non-owned, and hired, with limits of \$1,000,000 per accident for bodily injury and property damage

6.7 Other Insurance. The CONTRACTOR shall provide all other insurance required to be maintained under applicable laws, ordinances, rules, and regulations.

6.8 Proof of Insurance. The CONTRACTOR shall not commence work on the PROJECT, nor shall it allow any Subcontractor to commence work on the PROJECT until all required insurance and certificates have been obtained and delivered in duplicate to the DISTRICT for approval subject to the following requirements:

(a) Certificates and insurance policies shall include the following clause:

"This policy shall not be non-renewed, canceled, or reduced in required limits of liability or amounts of insurance until notice has been mailed to the DISTRICT."

(b) Certificates of insurance shall state in particular those insured, the extent of insurance, location and operation to which the insurance applies, the expiration date, and cancellation and reduction notices.

(c) Certificates of insurance shall clearly state that the DISTRICT and the Architect are named as additional insureds under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by DISTRICT.

(d) The CONTRACTOR and its Subcontractors shall produce a certified copy of any insurance policy required under this Section upon written request of the DISTRICT.

6.9 Compliance. In the event CONTRACTOR fails to furnish and maintain any insurance required by this Article, the CONTRACTOR shall be in default under the Contract. Compliance by CONTRACTOR with the requirement to carry insurance and furnish certificates or policies evidencing the same shall not relieve the CONTRACTOR from liability assumed under any provision of the Contract Documents, including, without limitation, the obligation to defend and indemnify the DISTRICT.

## **ARTICLE 7 - PREVAILING WAGES**

Wage rates for this PROJECT shall be in accordance with the general prevailing rate of holiday and overtime work in the locality in which the work is to be performed for each craft, classification or type of work needed to execute the contract as determined by the Director of the Department of Industrial Relations. Copies of schedules of rates so determined by the Director of the Department of Industrial Relations are on file at the administrative office of the DISTRICT and are also available from the Director of the Department of Industrial Relations. The following are

hereby referenced and made a part of this Agreement and CONTRACTOR stipulates to the provisions contained therein:

- (a) Chapter 1 of Part 7 of Division 2 of the Labor Code (Section 1720 et seq.);
- (b) California Code of Regulations, Title 8, Chapter 8, Subchapters 3-6 (Section 16000 et seq.); and

### **ARTICLE 8 - TERMINATION OF THE CONTRACT**

8.1 Termination for Cause. The DISTRICT may terminate the CONTRACTOR and/or this Contract for the following reasons:

- (a) Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- (b) Persistently or repeatedly is absent, without excuse, from the job site;
- (c) Fails to make payment to Subcontractors, suppliers, materialmen, etc.;
- (d) Persistently disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;
- (e) Becomes bankrupt or insolvent, including the filing of a general assignment for the benefit of creditors;
- (f) CONTRACTOR fails to follow the inspection procedure required by DSA or takes actions to delay or frustrate the inspection process; or
- (g) Otherwise is in substantial breach of a provision of the Contract Documents.

8.2 Notification of Termination. When any of the above reasons set forth in Article 8.1 above exists, the DISTRICT may, without prejudice to any other rights or remedies of the DISTRICT and after giving the CONTRACTOR and the CONTRACTOR's surety (if applicable) written notice of five (5) days, terminate the CONTRACTOR and/or this Contract and may, subject to any prior rights of the surety (if applicable):

- (a) Take possession of the PROJECT and of all material, equipment, tools, and construction equipment and machinery thereon owned by the CONTRACTOR;
- (b) Accept assignment of Subcontracts. CONTRACTOR acknowledges and agrees that if the DISTRICT (in its sole and absolute discretion) decides to takeover completion of the PROJECT, the CONTRACTOR agrees to immediately assign all subcontracts to the DISTRICT which the DISTRICT has chosen to accept; and
- (c) Complete the Work by any reasonable method the DISTRICT may deem expedient, including contracting with a replacement contractor or contractors.

8.3 Payments Withheld. If the DISTRICT terminates the Contract for one of the reasons stated in Article 8.1 above, the CONTRACTOR shall not be entitled to receive further payment until the Work is complete. All costs associated with the termination and completion of the PROJECT shall be the responsibility of the CONTRACTOR and/or its surety (if applicable).

8.4 Payments Upon Completion. If the unpaid balance of the Contract Sum exceeds costs of completing the PROJECT, including compensation for professional services and expenses made necessary thereby, such excess shall be paid to the CONTRACTOR. If such costs exceed the unpaid balance, the CONTRACTOR shall pay the difference to the DISTRICT. This payment obligation shall survive completion of the Contract.

8.5 Termination for Convenience. DISTRICT may terminate the Contract upon fifteen (15) calendar days of written notice to the CONTRACTOR and use any reasonable method the DISTRICT deems expedient to complete the Project, including contracting with replacement contractor or contractors, if it is found that reasons beyond the control of either the DISTRICT or CONTRACTOR make it impossible or against the DISTRICT's interest to complete the Project. In such a case, the CONTRACTOR shall have no Claims against the DISTRICT except for:

8.6 (1) the actual cost for approved labor, materials, and services performed in accordance with the Contract Documents which have not otherwise been previously paid for and which are supported and documented through timesheets, invoices, receipts, or otherwise; and (2) profit and overhead of ten percent (10%) of the approved costs in item (1); and (3) termination cost of five percent (5%) of the approved costs in item (1). CONTRACTOR acknowledges and agrees that if the DISTRICT (in its sole and absolute discretion) decides to takeover completion

of the Project, the CONTRACTOR agrees to immediately assign all subcontracts to the DISTRICT which the DISTRICT has chosen to accept.

8.7 In the event of a dispute between the DISTRICT and CONTRACTOR, the CONTRACTOR shall proceed diligently with performance of the Contract, and the DISTRICT shall continue to make any undisputed payments in accordance with the Contract. If the dispute is not resolved informally, CONTRACTOR agrees it will neither rescind the Contract nor stop the progress of the work, but CONTRACTOR's sole remedy shall be to comply with the Dispute procedure set forth in Section 34 of the Terms and Conditions to Contract.

## ARTICLE 9 - COMPLETION OF THE WORK

### 9.1 Close-Out Procedures

(a) *Incomplete Punch Items.* When the CONTRACTOR considers the Work Substantially Complete (See Article 2 for definition of Substantially Complete), the CONTRACTOR shall prepare and submit to the DISTRICT a comprehensive list of minor items to be completed or corrected (hereinafter "Incomplete Punch Items"). The CONTRACTOR and/or its Subcontractors shall proceed promptly to complete and correct the Incomplete Punch Items listed. Failure to include an item on such list does not alter the responsibility of the CONTRACTOR to complete all Work in accordance with the Contract Documents.

CONTRACTOR is aware that Title 24 Section 4-343(a) provides:

*"RESPONSIBILITIES. IT IS THE DUTY OF THE CONTRACTOR TO COMPLETE THE WORK COVERED BY HIS OR HER CONTRACT IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS THEREFORE. THE CONTRACTOR IN NO WAY IS RELIEVED OF ANY RESPONSIBILITY BY THE ACTIVITIES OF THE ARCHITECT, ENGINEER, INSPECTOR OR DSA IN THE PERFORMANCE OF SUCH DUTIES."*

If any of the conditions noted in Article 2 as defining Substantial Completion are not met, the Inspector, Architect or District may reject CONTRACTOR's Incomplete Punch Items as premature. If the Architect and Inspector commence review of Incomplete Punch Items, all rights are reserved until the Project actually meets the definition of Substantially Complete. Liquidated Damages, warranties, and other contractual rights are not affected by Incomplete Punch Items unless otherwise addressed in these General Conditions.

Once the Inspector, Architect, and/or DISTRICT determine the Project is Substantially Complete, a Certificate of Substantial Completion shall be issued. The Inspector, Architect, and/or DISTRICT shall prepare a Punch List of items which is an inspection report of the Work, if any, required in order to complete the Contract Documents and ensure compliance with the Plans and Specifications so the Project may be completed by the CONTRACTOR and a final DSA Close-Out is approved. When all Work for the Project is Complete, including Punch Lists and all Work complies with the approved Contract Documents and Change Orders, the Project has reached Final Completion.

(b) *Time for Completion of Punch List.* CONTRACTOR shall only be given a period of no more than thirty (30) days to complete the Punch List on Project. During the Punch List period CONTRACTOR Superintendent and Project Manager shall remain engaged in the Project and shall not be removed or replaced. If the Punch List is not completed at the end of the Punch List time then CONTRACTOR shall issue a valued Punch List within 5 days after the date the Punch List time ends. If CONTRACTOR does not issue such a list, the DISTRICT or Architect may issue a valued Punch List to the CONTRACTOR and withhold up to 150% of the value of the Punch List Work.

Failure to issue a timely written request for additional time to complete Punch List shall result in the deletion of the remaining Punch List Work and the issuance of a Deductive Change Order.

A. Extension of Time to Complete Punch List. If CONTRACTOR cannot finish the Punch List Work during the time period allotted under Article 9.1(b), the CONTRACTOR may make a written request for a Non-Compensable Punch List time extension accompanied by an estimate of the number of additional days it will take to complete the Punch List Work for a written consent from the DISTRICT to allow continued Punch List Work. Punch List time extensions are a maximum of thirty (30) days for each request and must be accompanied by an Itemized Valued Punch List.

B. If there is no valued Punch List accompanying any request or if CONTRACTOR intends to undertake Punch List without the continued support and supervision of its Superintendent and Project Manager, the DISTRICT, Construction Manager or Architect may issue a valued Punch List, reject the Punch List Time Extension and deduct 150% of the valued Punch List and proceed to Close-Out the Project. CONTRACTOR shall cease work on the Project and proceed to complete CONTRACTOR's Retention Payment Application and complete the Work for the Project required pursuant to Article 9.4(c).

(c) DISTRICT Rejection of Written Request for Punch List Time Extensions. Following sixty (60) Days of Punch List under Article 9.1(b), the DISTRICT has the option of rejecting Punch List Time Extension requests. The DISTRICT may deduct the value of remaining Punch List Work. If the DISTRICT rejects the Punch List Time Extension request then CONTRACTOR shall cease Work on the Project and proceed to Final Inspection pursuant to Article 9.4(b).

(d) Punch List Liquidated Damages to Compensate for Added DISTRICT Project Costs. If the total time utilized for Punch List exceeds sixty (60) days [the thirty (30) day period under Article 9.1(b) plus an additional thirty (30) day period that has been requested in writing], and the DISTRICT grants an additional written Punch List Time Extension that exceeds sixty (60) days of Punch List, then Contactor shall be charged liquidated damages in accordance with Article 3 for continued Punch List Work to compensate for an Inspector, Architect, and/or Construction Manager's extended time on the Project.

CONTRACTOR received thirty (30) days without any charges for Punch List Liquidated Damages and is placed on notice pursuant to this Article and dollar amount indicated in Article 3 is due for each day of Punch List that exceeds sixty (60) days. Starting at ninety (90) days of Punch List (an excessive number of days to complete Punch List), the DISTRICT shall be entitled to adjust Punch List Liquidated Damages to an estimate of the actual costs incurred to oversee, monitor and inspect the Punch List. If costs exceed the amount indicated in Article 3 per day, the anticipated extended contract charges for Inspection, Architect, Construction Manager, and any other costs that will be incurred due to the extended Punch List shall be itemized and a daily rate of Punch List Liquidated Damages shall be presented in writing to the CONTRACTOR within five (5) days following the receipt of a written request for Punch List time extension by the CONTRACTOR that extends the Punch List time beyond ninety (90) days. This written notice of actual Punch List Liquidated Damages may be provided to the CONTRACTOR at any time following the first written request for Punch List Time extension requested under Article 9.1(b). The Adjusted Actual Punch List Liquidated Damage amount shall be applicable as Punch List Liquidated Damages commencing on the ninetieth (90th) day of Punch List.

## 9.2 Close-Out Requirements for Final Completion of the Project

(a) Utility Connections. Buildings shall be connected to water, gas, sewer, and electric services, complete, and ready for use. Service connections shall be made and existing services reconnected.

(b) As-Builts Up to Date and Complete. The intent of this procedure is to obtain an exact "As-Built" record of the Work upon completion of the project. The exact location and elevations of all covered utilities, including valves, cleanouts, etc. must be shown shall be carefully and correctly drawn on the prints and all items shall be accurately located and dimensioned from finished surfaces of building walls on all record drawings.

A. CONTRACTOR is liable and responsible for inaccuracies in As-Built drawings, even if they become evident at some future date.

B. Upon completion of the Work and as a condition precedent to approval of

Retention Payment, CONTRACTOR shall obtain the Inspector's (or DISTRICT when there is no Project Inspector) approval of the "As-Built" information. When completed, CONTRACTOR shall deliver corrected sepias and/or a Diskette with an electronic file in a format acceptable to the DISTRICT.

C. DISTRICT may withhold the cost to hire a draftsman and potholing and testing service to complete Record As-Built Drawings at substantial cost if the CONTRACTOR does not deliver a complete set of Record As-Built Drawings. This shall result in withholding of between \$10,000 to \$20,000 per building that does not have a corresponding Record As-Built Drawing.

(c) Any Work not installed as originally indicated on Drawings.

(d) All DSA Close-Out requirements (See DSA Certification Guide) CONTRACTOR is also specifically directed to Item 3.2 in the DSA Certification Guide and the applicable certificates for the DSA-311 form.

(e) Submission of Form 6-C. CONTRACTOR shall be required to execute a Form 6-C as required under Title 24 Sections 4-343. The CONTRACTOR understands that the filing with DSA of a Form 6-C is a requirement to obtain final DSA Approval of the Construction by CONTRACTOR and utilized to verify under penalty of perjury that the Work performed by CONTRACTOR complies with the DSA approved Contract Documents. The failure to file a DSA Form 6-C has two consequences. First, the Construction of the Project will not comply with the Design Immunity Provisions of Government Code Section 830.6 and exposes the DISTRICT and the individual Board members to Personal Liability for injuries that occur on the Project.

Secondly, under DSA IR A-20, since the Project cannot be certified by DSA, no future or further Projects will be authorized so CONTRACTOR will have essentially condemned the campus from any future modernization or addition of new classrooms through their failure to file the DSA Form 6-C.

A. Execution of the DSA Form 6-C is mandatory. Refusal to Execute the Form 6-C, which is a Final DSA Verified Report that all Work performed complies with the DSA approved Contract Documents is a violation of Education Code Section 81144 and shall be referred to the Attorney General for Prosecution.

B. Referral to the DISTRICT Attorney for Extortion. If the CONTRACTOR's refusal to execute the DSA Form 6-C is to leverage a Dispute, Claim or Litigation, then the matter shall also be referred to the DISTRICT Attorney for prosecution for Extortion.

C. CONTRACTOR shall be Responsible for All Costs to Certify the Project. The DISTRICT may certify the Project complies with Approved Plans and Specifications by utilizing the procedures under the Project Certification Guide (Located at the DSA website at [http://www.documents.dgs.ca.gov/dsa/plan\\_review\\_process/project\\_certification\\_guide\\_update\\_d\\_03-15-13.pdf](http://www.documents.dgs.ca.gov/dsa/plan_review_process/project_certification_guide_update_d_03-15-13.pdf)). All costs for professionals, inspection, and testing required for an alternate Project Certification shall be the CONTRACTOR's responsibility and the DISTRICT reserves its right to institute legal action against the CONTRACTOR and CONTRACTOR's Surety for all costs to certify the Project and all costs to correct Non-Compliant Work that is discovered during the Alternate Certification Process.

(f) Maintenance Manuals. At least thirty (30) days prior to final inspection, three (3) copies of complete operations and maintenance manuals, repair parts lists, service instructions for all electrical and mechanical equipment, and equipment warranties shall be submitted. All installation, operating, and maintenance information and Drawings shall be bound in 8½" x 11" binders. Provide a table of contents in front and all items shall be indexed with tabs. Each manual shall also contain a list of subcontractors, with their addresses and the names of persons to contact in cases of emergency. Identifying labels shall provide names of manufactures, their addresses, ratings, and capacities of equipment and machinery.

A. Maintenance manuals shall also be delivered in electronic media for the Project. Any demonstration videos shall also be provided on electronic media.

(g) Inspection Requirements. Before calling for final inspection, CONTRACTOR shall determine that the following Work has been performed:

- A. The Work has been completed.
- B. Mechanical and electrical Work complete, fixtures in place, connected and tested.
- C. Electrical circuits scheduled in panels and disconnect switches labeled.
- D. Painting and special finishes complete.
- E. Doors complete with hardware, cleaned of protective film relieved of sticking or binding and in working order.
- F. Tops and bottoms of doors sealed.
- G. Floors waxed and polished as specified.
- H. Broken glass replaced and glass cleaned.
- I. Grounds cleared of CONTRACTOR's equipment, raked clean of debris, and trash removed from Site.
- J. Work cleaned, free of stains, scratches, and other foreign matter, replacement of damaged and broken material.
- K. Finished and decorative work shall have marks, dirt and superfluous labels removed.
- L. Final cleanup.
- M. All Work pursuant to Article 9.4.
- N. Furnish a letter to DISTRICT stating that the DISTRICT's Representative or other designated person or persons have been instructed in working characteristics of mechanical and electrical equipment.

### 9.3 Costs of Multiple Inspections

More than two (2) requests of the DISTRICT to make inspections required under Paragraph 9.1 shall be considered an additional service of Architect, Inspector, Engineer or other consultants shall be the CONTRACTOR's responsibility and all subsequent costs will be prepared as a Deductive Change Order.

### 9.4 Completion and Final Payment

(a) Final Payment (95% Billing). The following items must be completed before the Final Pay Application will be accepted for processing at Substantial Completion of the Project:

- A. Inspector Sign off of each item in the DSA 152 Project Inspection Card;
- B. The Project has reached the Punch List items under Article 9.1(a) and the Project has been determined to be Substantially Complete under Article 2;
- C. Removal of temporary facilities and services;
- D. Testing, adjusting and balance records are complete;
- E. Removal of surplus materials, rubbish, and similar elements;
- F. Changeover of Door locks;
- G. Deductive items pursuant to Article 4; and,
- H. Completion and submission of all final Change Orders for the Project.

(b) Final Inspection (Punch List Completion)

CONTRACTOR shall comply with Punch List procedures under Article 9.1(a), and maintain the presence of Project Superintendent and Project Manager (not replacement project superintendent or project manager) until the Punch List is complete to ensure proper and timely completion of the Punch List. Under no circumstances shall CONTRACTOR demobilize its forces prior to completion of the Punch List.

Upon completion of the Work under Article 9.1, the CONTRACTOR shall notify the DISTRICT and Architect, who shall again inspect such Work. If the Architect and the DISTRICT finds the Work contained in Punch List acceptable under the Contract Documents and, therefore, the Work shall have reached Final Completion. Architect shall notify CONTRACTOR, who shall then submit to the Architect its Application for Retention Payment. This Application for Retention Payment shall contain any deductions under Article 4, including but not limited to incomplete Punch List items under Article 9.1.

Upon receipt and approval of Application for Retention Payment, the Architect shall issue a Form 6 stating that to the best of its knowledge, information, and belief, and on the basis of its observations,

inspections, and all other data accumulated or received by the Architect in connection with the Work, such Work has been completed in accordance with the Contract Documents. The DISTRICT shall thereupon inspect such Work and either accept the Work as complete or notify the Architect and the CONTRACTOR in writing of reasons why the Work is not complete. Upon acceptance of the Work of the CONTRACTOR as fully complete (which, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the DISTRICT shall record a Notice of Completion with the County Recorder, and the CONTRACTOR shall, upon receipt of payment from the DISTRICT, pay the amounts due Subcontractors.

If the Architect and the DISTRICT find that the Work Contained in the Punch List is unacceptable, then CONTRACTOR shall issue a valued Punch List within 5 days after the date the Punch List time ends. If CONTRACTOR does not issue such a list, the Owner or Architect may issue a valued Punch List to the CONTRACTOR and withhold up to 150% of the value of the Punch List Work.

(c) Retainage (100% Billing for the Entire Project)

The retainage, less any amounts disputed by the DISTRICT or which the DISTRICT has the right to withhold Pursuant to Article 4 (including but not limited to incomplete Punch List items under Article 9.1), shall be paid after approval by the DISTRICT of the Application for Retention Payment, after the satisfaction of the conditions set forth in Article 9, the Final Inspection under Article 9.4(b) is completed, and after thirty-five (35) days after the acceptance of the Work and recording of the Notice of Completion by DISTRICT. No interest shall be paid on any retainage, or on any amounts withheld due to a failure of the CONTRACTOR to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any Escrow Agreement between the DISTRICT and the CONTRACTOR.

A. Procedures for Application for Retention Payment. The following conditions must be fulfilled prior to release of Retention Payment:

- i. A full and final waiver or release of all Stop Notices in connection with the Work shall be submitted by CONTRACTOR, including a release of Stop Notice in recordable form, together with (to the extent permitted by law) a copy of the full and final release of all Stop Notice rights.
- ii. CONTRACTOR shall have made all corrections, including all Punch List Items, to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of DISTRICT required under the Contract Documents.
- iii. Each Subcontractor shall have delivered to the CONTRACTOR all written guarantees, warranties, applications, releases from the Surety and warranty bonds (if applicable) required by the Contract Documents for its portion of the Work.
- iv. CONTRACTOR must have completed all requirements set forth in Article 9.
- v. CONTRACTOR must have issued a Form 6-C for the Project.
- vi. CONTRACTOR shall have delivered to the DISTRICT all manuals and materials required by the Contract Documents.
- vii. CONTRACTOR shall have completed final clean up.
- viii. CONTRACTOR shall have all deductive items under Article 4 as part of the Retention Payment.

(d) Recording of a Notice of Completion After Punch List Period and Final Inspection.

When the Work, or designated portion thereof, is complete or the DISTRICT has completed the Article 4 process, the DISTRICT will file either a Notice of Completion or a Notice of Completion noting Valued Punch List items. Valued Punch List items will be deducted from the Retention Payment.

During the time when Work is being performed on the Punch List, the Project does not meet the definition of "Complete" under Public Contract Code Section 7107(c)(1) even if there is "beneficial occupancy" of the Project since that has been no "cessation of labor" on the Project. Completion of Punch List under this Article is not "testing, startup, or commissioning by the public entity or its agent." In other words, the continuing Punch List Work is CONTRACTOR labor on the Project until each and every item

of Punch List Work is complete or the time periods under Article 9.1 have expired.

(e) Warranties

Warranties required by the Contract Documents shall commence on the date of Completion of the entire Work. Warranty periods DO NOT commence at Substantial Completion or when a particular subcontractor work is complete. No additional charges, extras, Change Orders, or Claims may be sought for warranties commencing from the Notice of Completion.

DISTRICT shall have the right to utilize equipment, test, and operate as necessary for acclimation, or testing without voiding or starting warranties. Taking beneficial occupancy shall not start warranties except in the case where the DISTRICT agrees, in writing, that warranties shall commence running or where the DISTRICT is taking phased occupancy of specific buildings or areas and completes separate Punch Lists.

(f) Time for Submission of Application for Final Payment and Retention Payment (Unilateral Processing of Final and Retention Pay Application).

If CONTRACTOR submits a Final Pay Application which fails to include deductive items under Article 4, the DISTRICT or Architect shall note this defective request for Final Pay Application. The CONTRACTOR shall be notified that specific deductive items shall be included in the Final Pay Application. If CONTRACTOR either continues to submit the Final Pay Application without deductive items under Article 4, or a period of 14 calendar days passes after CONTRACTOR is provided written notice of deductive items for inclusion in Final Pay Application, then DISTRICT may either alter the Final Pay Application and recalculate the math on the Final Pay Application to address the Article 4 deductive items or process a Unilateral Final Pay Application.

(g) Unilateral Release of Retention

After the recordation of the Notice of Completion, or within sixty (60) days following the completion of the Punch List or the expiration of the time for completion of Punch List under Article 9.9.1, if CONTRACTOR does not make an Application for Release of Retention, the DISTRICT may unilaterally release retention less any deducts under Article 4, withholds due to stop notice, or other defective work on the Project. DISTRICT may also choose to unilaterally release Retention after deduction of 150% of any disputed items, which may also include items under Article 4. If a deduction pursuant to Article 4 is made from Retention, a letter deducting specific valued items shall be considered a notice of Default under the terms of the Escrow Agreement.

**ARTICLE 10 - CHANGES IN THE WORK**

10.1 Changes

(a) No Changes Without Authorization

There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order, Change Order Request, Immediate Change Directive, or order by the Architect for a minor change in the Work as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's Governing Board or designated representative with delegated authority (subject to Board ratification) has authorized the same and the cost thereof approved in writing by Change Order or executed Construction Change Directive. No extension of time for performance of the Work shall be allowed hereunder unless claim for such extension is made at the time changes in the Work are ordered, and such time duly adjusted in writing in the Change Order. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications. Notwithstanding anything to the contrary in this Article 10, all Change Orders shall be prepared and issued by the Architect or District and shall become effective when executed by the District's Governing Board, the Architect, and the Contractor.

Should any Change Order result in an increase in the Contract price, the cost of such Change Order

shall be agreed to, in writing, in advance by Contractor and District and be subject to the monetary limitations set forth in Public Contract Code section 20659 (Please check with the District since there are different interpretations of the limitations of Public Contract Code section 20659 depending on the County the Project is located). In the event that Contractor proceeds with any change in Work without first notifying District and obtaining the Architect's and District's consent to a Change Order, Contractor waives any claim of additional compensation for such additional work and Contractor takes the risk that a Notice of Non-Compliance may issue, a critical path Project delay may occur, and the Contractor will also be responsible for the cost of preparation and DSA CCD review fees for a corrective DSA approved Construction Change Directive.

***CONTRACTOR UNDERSTANDS, ACKNOWLEDGES, AND AGREES THAT THE REASON FOR THIS NOTICE REQUIREMENT IS SO THAT DISTRICT MAY HAVE AN OPPORTUNITY TO ANALYZE THE WORK AND DECIDE WHETHER THE DISTRICT SHALL PROCEED WITH THE CHANGE ORDER OR ALTER THE PROJECT SO THAT SUCH CHANGE IN WORK BECOMES UNNECESSARY AND TO AVOID THE POSSIBLE DELAYS ASSOCIATED WITH THE ISSUANCE OF A NOTICE OF NONCOMPLIANCE.***

(b) Notices of Non-Compliance

Contractor deviation or changes from approved Plans and Specifications may result in the issuance of a Notice of Non-Compliance (See DSA Form 154). Contractor is specifically notified that deviations from the Plans and Specifications, whether major or minor, may result in the requirement to obtain a DSA Construction Change Directive to correct the Notice of Non-Compliance. (See Article 10.3.(a)(A) for Definition of CCD). In some cases, the lack of a DSA approved CCD AND verification from the Inspector that a Notice of Non-Compliance has been corrected may result in a critical path delay to the next stage of Work on the Project. Specifically, a deviation from approved Plans and Specifications may prevent approval of the category of Work listed in the DSA 152 Project Inspection Card. Any delays that are caused by the Contractor's deviation from approved Plans and Specifications shall be the Contractor's responsibility.

(c) Architect Authority

The Architect will have authority to order minor changes in the Work that do not involve DSA Approval not involving any adjustment in the Contract Sum, or an extension of the Contract Time.

10.2 Change Orders ("CO")

(a) A CO is a written instrument prepared by the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, and the Architect stating their agreement upon all of the following:

- A. A description of a change in the Work;
- B. The amount of the adjustment in the Contract Sum, if any; and
- C. The extent of the adjustment in the Contract Time, if any.

A CO may be comprised of ICD's, Response to RFP's and COR's

10.3 Construction Change Directive (CCD Category A, and CCD Category B) and Immediate Change Directive (ICD)

(a) Definitions

- A. Construction Change Directive (CCD). A Construction Change Directive is a DSA term that is utilized to address changes to the DSA approved Plans and Specifications. There are two types of Construction Change Directives. 1) DSA approved CCD Category A (DSA Form 140) for Work affecting Structural, Access or Fire-Life Safety of the Project which will require a DSA approval; and 2) CCD Category B (DSA Form 141) for work NOT affecting Structural Safety, Access Compliance or Fire and Life Safety that will not require a DSA approval (except to confirm that no Approval is required);
- B. Immediate Change Directive (ICD). An Immediate Change Directive is a written order to

the Contractor prepared by the Architect and signed by the District (and CM if there is a CM on the Project) and the Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The District may by ICD, without invalidating the Contract, direct immediate changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions within. If applicable, the Contract Sum and Contract Time will be adjusted accordingly. In the case of an Immediate Change Directive being issued, Contractor must commence Work immediately or delays from failure to perform the ICD shall be the responsibility of Contractor and the failure to move forward with Work immediately shall also be grounds for Termination under Article 8.

(b) Use to Direct Change

An ICD shall be used to move work forward immediately and to avoid delay. In some cases, an ICD shall be issued in the absence of agreement on the terms of a CO, COR, or RFP. The anticipated not to exceed price for the Work will be inserted into the ICD. In the case of an ICD issued to correct Contractor Deficiencies or to correct a Contractor caused Notice of Non-Compliance, the ICD may be issued with \$0 and 0 time. Contractor may prepare a COR associated with the ICD pursuant to Article 10. However, Contractor shall proceed with all Work required under an Approved ICD immediately upon issuance. Failure to proceed with the Work under an ICD shall be grounds for Termination for Cause under Article 8.

If adequate time exists, an ICD may be subject of an RFP for pricing and determination if any time that may be required. However, if an RFP is not completed, Contractor shall immediately commence Work when an ICD is issued. If the RFP is incomplete, it may still be completed to be submitted for Pricing Purposes as long as the PR is submitted within the timeline provided by the PR, or within 10 days following issuance of the ICD.

(c) ICD Issued Over a Notice of Non-Compliance or to Cover Work Subject to a DSA 152 Sign Off  
In some cases, an ICD shall be for the purpose of proceeding with Work to keep the Project on Schedule and as an acknowledgement by the District that Contractor is proceeding with Work contrary to a Notice of Non-Compliance, prior to issuance of a DSA approved CCD Category A, or to direct the covering of Work which has not yet received a DSA 152 Inspection Approval to move forward.

A. Contractor Compliance with all Aspects of an ICD. Contractor is to undertake the ICD and comply with all aspects of the Work outlined in the ICD. Inspector is to inspect the Work pursuant to the ICD. Failure to follow the ICD may result in Termination of the Contractor pursuant to Article 8.

B. Exception in the Case of DSA Issued Stop Work Order. Contractor must proceed with an ICD even if a CCD has not been approved by DSA except in the case of a DSA issued Stop Work Order. If a DSA Stop Work Order is issued, Contractor must stop work and wait further direction from the District.

C. ICD Due to Contractor Deficiency or Contractor Caused Notice of Non-Compliance. If an ICD is issued to correct a Contractor Deficiency or a Contractor caused notice of Non-Compliance, Contractor specifically acknowledges responsibility for all consequential damages associated with the Contractor Deficiency or Contractor Caused Notice of Non-Compliance and all consequential damages and costs incurred to correct the deficiency.

### 10.3 Request for Information (“RFI”)

(a) Definition

An RFI is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the Drawings or Specifications, or to address problems which have arisen under field conditions.

A. An RFI shall not be used as a vehicle to generate time extensions.

B. Resubmission of the same or similar RFI is not acceptable. RFI's that are similar should be addressed in Project meetings where the requestor (Contractor, subcontractor or vendor) is able to address the particular issue with the Architect or Engineer and a resolution addressed in the minutes.

C. An RFI response applicable to a specific area cannot be extended to other situations unless specifically addressed in writing within the RFI or in a separate RFI.

D. RFI's should provide a proposed solution and should adequately describe the problem that has arisen.

(b) Scope

The RFI shall reference all the applicable Contract Documents including Specification section, detail, page numbers, Drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and interpretations of the issue raised by the RFI. An RFI cannot modify the Contract Cost, Contract Time, or the Contract Documents.

(c) Response Time

The Architect must respond to a RFI within a reasonable time after receiving such request. If the Architect's response results in a change in the Work, then such change shall be effected by a written CO, COR, RFP, or ICD, if appropriate. If the Architect cannot respond to the RFI within a reasonable time, the Architect shall notify the Contractor, with a copy to the Inspector and the District, of the amount of time that will be required to respond.

(d) Costs Incurred

The Contractor shall be responsible for any costs incurred for professional services, which shall be subject to a Deductive Change Order, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request. District, at its sole discretion, shall issue a Deductive Change Order to Contractor for all such professional services arising from this Article.

10.4 Request for Proposal ("RFP")

(a) Definition

An RFP is a written request prepared by the Architect (and/or CM) requesting the Contractor to submit to the District and the Architect an estimate of the effect of a proposed change on the Contract Price and (if applicable) the Contract Time. If Architect issues a CCD, the Changed items in the CCD shall be addressed as an RFP and all responses shall be prepared to a CCD as addressed in this Paragraph 10.4.

(b) Scope

An RFP shall contain adequate information, including any necessary Drawings and Specifications, to enable Contractor to provide the cost breakdowns required by Paragraph 10.6. The Contractor shall not be entitled to any Additional Compensation for preparing a response to an RFP, whether ultimately accepted or not.

(c) Response Time

Contractor shall respond to an RFP within ten (10) days or the time period otherwise set forth in the RFP.

10.5 Change Order Request ("COR")

(a) Definition

A COR is a written request prepared by the Contractor supported by backup documentation requesting that the District and the Architect issue a CO based upon a proposed change, cost, time, or cost and time that may be incurred on the Project or arising from an RFP, ICD, or CCD.

(b) Changes in Price

A COR shall include breakdowns per Paragraph 10.6 to validate any change in Contract Price due to proposed change or claim.

(c) Changes in Time

A COR shall also include any additional time required to complete the Project only if the

delay is a critical path delay. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Article 2. A schedule fragnet showing the time delay must be submitted with the COR. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a COR, then the Contractor is thereafter precluded from requesting or claiming a delay.

## 10.6 Cost of Change Orders

### (a) Scope

Within ten (10) days after a request is made for a change that impacts the Contract Sum as defined in Article 4, the critical path, or the Contract Time as defined in Article 2, the Contractor shall provide the District and the Architect, with a written estimate of the effect of the proposed CO upon the Contract Sum and the actual cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing actual quantities, hours, unit prices, and wage rates required for the change, and the effect upon the Contract Time of such CO. Changes may be made by District by an appropriate written CO, or, at the District's option, such changes shall be implemented immediately upon the Contractor's receipt of an appropriate written Construction Change Directive.

District may, as provided by law and without affecting the validity of this Agreement, order changes, modification, deletions and extra work by issuance of written CO or Construction Change Directives from time to time during the progress of the Project, Contract sum being adjusted accordingly. All such Work shall be executed under conditions of the original Agreement except that any extension of time caused thereby shall be adjusted at time of ordering such change. District has discretion to order changes on a "time and material" basis with adjustments to time made after Contractor has justified through documentation the impact on the critical path of the Project.

(b) Time and Material Charges. If the District orders Work on a "time and material" basis, timesheets shall be signed daily by the Inspector or District Designee at or near the time the Work is actually undertaken and shall show the hours worked, and the Work actually completed. No time sheets shall be signed the next day. A copy shall be provided to the Person signing the document at the time the document is signed, but not before 10 am the following day.

### (c) Determination of Cost

The amount of the increase or decrease in the Contract Price from a CO or COR, if any, shall be determined in one or more of the following ways as applicable to a specific situation:

A. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. If an agreement cannot be reached within fifteen (15) days after submission and negotiation of Contractor's proposal, Contractor may submit pursuant to Paragraph 10.6(d). Submission of sums which have no basis in fact are at the sole risk of Contractor and may be a violation of the False Claims Act set forth under Government Code Section 12650 et seq.);

i. If the District objects to 10.6(c).A as a method for submission due to inaccuracies in the submitted amount, overstatement of manpower or time required to perform the CO, or unreliability of the data provided, the District may either have the Architect or a professional estimator determine the cost for the CO, and the applicable time extension, or the Contractor shall utilize Paragraph 10.6(c).D or 10.6(d).

ii. Once the District provides a written objection to use of Article 10.6(c).A due to unreliability of the estimated price, the Contractor shall no longer utilize mutual acceptance of a lump sum as a method for submission of CO's and shall provide a breakdown of estimated or actual costs pursuant to Article 10.6(c).D or 10.6(d).

B. By unit prices contained in Contractor's original bid and incorporated in the Project documents or fixed by subsequent agreement between District and Contractor;

C. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee. However, in the case of disagreement, Contractor must utilize the procedure under section 10.6(d).; or

D. By cost of material and labor and percentage of overhead and profit. If the value is

determined by this method the following requirements shall apply:

- i. Basis for Establishing Costs
  - a) Labor will be the actual cost for wages prevailing locally for each craft or type of workers at the time the extra Work is done, plus employer payments of payroll taxes and workers compensation insurance (exclude insurance costs as part of the Overhead and Profit mark-up), health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. In no case shall the total labor costs exceed the applicable prevailing wage rate for that particular classification. The use of a labor classification which would increase the extra Work cost will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
  - b) Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight, and delivery. The District reserves the right to approve materials and sources of supply or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the District.
  - c) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$250 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the Work is performed. Rates applied shall be appropriate based on actual equipment need and usage. Monthly, weekly or other extended use rates that results in the lowest cost shall be applied if equipment is used on site for extended periods.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Necessary loading and transportation costs for equipment used on the extra Work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the District than holding it at the Work Site, it shall be returned unless the Contractor elects to keep it at the Work Site at no expense to the District.

All equipment shall be acceptable to the Inspector, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and modifications shall be used to classify equipment, and equipment shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

If tool and equipment charges are part of a Dispute, Claim, or Appeal, the District reserves the right to utilize actual costs for tools and equipment or a depreciation rate for equipment based on audit finding and deduct any rental charges that exceed actual or depreciated costs.

- ii. Other Items. The District may authorize other items which may be required

on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required by the Work, and which are of a type not ordinarily available from the Contractor or any of the Subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.

- iii. Invoices. Vendors' invoices for material, equipment rental, and other expenditures shall be submitted with the COR. If the request for payment is not substantiated by invoices or other documentation, the District may establish the cost of the item involved at the lowest price which was current at the time of the Daily Report.
- iv. Overhead. Overhead, including direct and indirect costs, shall be submitted with the COR and include: field overhead, home office overhead, off-site supervision, CO preparation/negotiation/research, time delays, project interference and disruption, additional guaranty and warranty durations, on-site supervision, additional temporary protection, additional temporary utilities, additional material handling costs, liability and property damage insurance, and additional safety equipment costs.

(d) Format for COR or CO's

The following format shall be used as applicable by the District and the Contractor to communicate proposed additions to the Contract. All costs submitted shall be actual costs and labor shall be unburdened labor.

	EXTRA	CREDIT
(a) Material (attach itemized quantity and unit cost plus sales tax)		
(b) Labor (attach itemized hours and rates)		
(c) Equipment (attach invoices)		
(d) Subtotal		
(e) Social Security, and Unemployment Taxes, not to exceed as follows: FICA @ 6.2%- with a wage ceiling of \$84,900; Medicare @ 1.45%- no wage ceiling; FUTA @ .8%- with a wage ceiling of \$7,000; ETT and SUI @ 2.3%- with a wage ceiling of \$7,000; Workers' Compensation @ 5.94%; Total not-to-exceed is 16.69%. (Note: Modifications to these percentages will be evaluated and possibly modified only on a case-by- case basis and only after proper proof of alternate percentages are documented and approved in advance. In addition, as wage ceilings are met, those corresponding percentages must drop from the "burden" calculations).		
(f) Subtotal		
(g) Total Overhead and Profit (inclusive of Liability and Property Damage Insurance): Not to exceed: • Fifteen percent (15%) of Item (f) if costs are under_____.		
(h) Subtotal		
(i) Bond not to exceed one percent (1%) of Item (f)		
(k) TOTAL		
(l) Time		

The undersigned Contractor approves the foregoing Change Order or Immediate Change Directive as to the changes, if any, and the Contract price specified for each item and as to the extension of time allowed, if any, for completion of the entire Work on account of said Change Order or Immediate

Change Directive, and agrees to furnish all labor, materials and service and perform all Work necessary to complete any additional Work specified therein, for the consideration stated herein. It is understood that said Change Order or Immediate Change Directive shall be effective when approved by the Governing Board of the District.

It is expressly understood that the value of such extra Work or changes, as determined by any of the aforementioned methods, expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Any costs, expenses, damages or time extensions not included are deemed waived.

The Contractor expressly acknowledges and agrees that any change in the Work performed shall not be deemed to constitute a delay or other basis for claiming additional compensation based on theories including, but not limited to, acceleration, suspension or disruption to the Project.

A. Adjustment for Time and Compensable Delay. A CO shall also include any additional time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Article 2. A schedule fragment showing the time delay must be submitted with the CO. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a CO, then the Contractor is thereafter precluded from requesting or claiming a delay.

(f) Deductive Change Orders

All Deductive Change Order(s) must be prepared utilizing the form under Paragraph 10.6(d) setting forth the actual costs incurred. Except in the case of an Article 4.6 Deductive Change Order where no mark-up shall be allowed, Contractor will be allowed a maximum of 5% total profit and overhead. Unilateral Deductive Change Orders

For Unilateral Deductive Change Orders, or where credits are due from Contractor for Allowances, Deductive Items, Inspection, Damage, DSA CCD review costs, Architect or Inspector costs for after hours or corrective services, Work removed from the Agreement under Article 4.6, there shall be no mark-up.

District may, any time after a Deductive Change Order is presented to Contractor by District for items under Article 4.6 of if there is disagreement as to the Deductive Change Order, issue a unilateral Deductive Change Order on the Project and deduct the Deductive Change Order from a Progress Payment, Final Payment, or Retention.

(g) Discounts, Rebates, and Refunds

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Contractor, and the Contractor shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of the Contractor's cost in determining the actual cost of construction for purposes of any change, addition, or omissions in the Work as provided herein. All CO's are subject to Audit under Article 13.11 for discounts, rebates, and refunds.

(h) Accounting Records

With respect to portions of the Work performed by COs and Construction Change Directives on a time-and-materials, unit-cost, or similar basis, the Contractor shall keep and maintain cost-accounting records in a format consistent with accepted accounting standards and satisfactory to the District, which shall be available to the District on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents.

Any Time and Material Charges shall require Inspector's signature on Time and Material cards showing the hours worked and the Work actually completed.

(i) Notice Required

If the Contractor desires to initiate a Dispute for an increase in the Contract Price, or any extension in the Contract Time for completion, Contractor shall notify the applicable party responsible for addressing the Dispute or Claim. No claim or Dispute shall be considered unless made in accordance with this subparagraph. Contractor shall proceed to execute the Work even though the adjustment may not have been agreed upon. Any change in the Contract Price or extension of the Contract Time resulting from such claim shall be authorized by a CO.

(j) Applicability to Subcontractors

Any requirements under this Article 10 shall be equally applicable to CO's, COR's or ICD's issued to Subcontractors by the Contractor to the same extent required by the Contractor.

(k) Alteration to Change Order Language

Contractor shall not alter or reserve time in COR's, CO's or ICD's. Contractor shall execute finalized CO's and proceed with proper notice. If Contractor intends to reserve time without an approved CPM schedule prepared pursuant to Article 8 or without submitting a Fragnet showing delay to critical path, then Contractor may be prosecuted pursuant to the False Claim Act.

## ARTICLE 11 - MISCELLANEOUS PROVISIONS

11.1 [Not Used]

11.2 Record Audit. In accordance with Government Code Section 8546.7, records of both the DISTRICT and the CONTRACTOR shall be subject to examination and audit by the Auditor General for a period of three (3) years after final payment.

11.3 CONTRACTOR's License. The CONTRACTOR must possess throughout the PROJECT a **Class B** CONTRACTOR's License, issued by the State of California, which must be current and in goodstanding.

11.4 CONTRACTOR's Registration with DIR. Senate Bill 854 was signed into law on June 20, 2014, and provides for new requirements for both contractors and subcontractors for any public works project. The new laws take effect on July 1, 2014. This PROJECT is a public works project as defined in Labor Code section 1720. CONTRACTOR and all Subcontractors performing any portion of the Work must comply with the requirements of Senate Bill 854 including, without limitation, Labor Code Sections 1725.5 and 1771.1.

CONTRACTOR and all Subcontractors performing any portion of the Work must register with the California Department of Industrial Relations ("DIR") and qualified to perform public work pursuant to Labor Code section 1725.5 throughout the duration of the Project. CONTRACTOR and Subcontractors will be required to pay an initial set-up fee as well as an annual renewal fee to the DIR. The fee has initially been set at three hundred dollars (\$300.00) but is subject to change. For more information, and up to date requirements, Contractors are required to periodically review the DIR's website is <http://www.dir.ca.gov>. The Contractor shall provide proof that it, and all subcontractors providing any work on the Project, are currently registered with DIR. Contractor shall provide proof that it, and all subcontractors providing any work on the Project, are currently registered with DIR. If any subcontractor is not registered with DIR throughout the Project, Contractor may be required to replace said subcontractor at no cost or penalty to the District or the District may terminate this agreement for cause, as set forth below. Contractor shall be solely responsible for ensuring compliance with Labor Code section 1725.5 as well as any requirements implemented by DIR applicable to its services or its subcontractors throughout the term of the Agreement and in no event shall Contractor be granted increased payment from the District or any time extensions to complete the Project as a result of Contractor's efforts to maintain compliance with the Labor Code or any requirements implemented by the DIR. Failure to comply with these requirements shall be deemed a material breach of this Agreement and ground for termination for cause. The Contractor and all subcontractors shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4 on at least on a monthly basis (or more frequently if required by the District or the Labor Commissioner) and in a format prescribed by the Labor Commissioner. The District reserves the right to withhold contract payments if the District is notified, or determines as the result of its own investigation, that Contractor is in violation of any of the

requirements set forth in Labor Code section 1720 et seq. at no penalty or cost to the District. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

1. Contractors and subcontractors who apply to the DIR will be required to meet certain minimum qualifications to bid on any public works projects. These minimum requirements include: (i) workers compensation coverage, (ii) Contractors State License Board license (if applicable to the trade), (iii) no delinquent unpaid wage or penalty assessments owed to any employee or enforcement agency, (iv) no state or Federal debarment, and (v) no prior violations of this registration requirement (for a first violation in a month period a contractor or subcontractor can still qualify by paying the applicable penalty). CONTRACTOR and all subcontractors should carefully review the DIR website for all applicable requirements. Contractor shall be solely responsible for complying with any and all requirements issued by the DIR throughout the Project and shall indemnify the District for any violation of the applicable DIR requirements. Contractor and all subcontractors shall furnish certified payroll records directly to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3) at least monthly on forms provided by the Labor Commissioner/Division of Labor Standards Enforcement. The District, and/or the Labor Commissioner, at any time, may require Contractor to submit certified payroll records more often than the monthly requirement set forth herein. All certified payroll record submissions shall comply with the DIR requirements as set forth in Labor Code sections 1771.4 and 1776. Contractor and its subcontractor(s) shall keep accurate certified payroll records of employees and, if the Project is subject to State Labor Compliance, directly to the Labor Commissioner weekly and within ten (10) days of any request by the District or the Labor Commissioner in accordance with section 16461 of Title 8 of the California Code of Regulations. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement.

11.5 The CONTRACTOR shall enforce strict discipline and good order among the CONTRACTOR's and Subcontractor's employees, and other persons carrying out the Contract. The CONTRACTOR shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. As used in this subsection, "unfit" includes any person who the DISTRICT concludes is improperly skilled for the task assigned to that person, who fails to comply with the requirements of this article, or who creates safety hazards which jeopardize other persons and/or property.

11.6 CONTRACTOR shall take all steps necessary to insure that employees of CONTRACTOR or any of its subcontractors' employees do not use, consume, or work under the influence of any alcohol, tobacco or illegal drugs while on the PROJECT. CONTRACTOR shall further prevent any of its employees or its subcontractor employees from playing any recorded music devices or radios or wearing any radio headphone devices for entertainment while working on the PROJECT. Likewise, CONTRACTOR shall prevent its employees or subcontractor's employees from bringing any animal onto the PROJECT. CONTRACTOR shall not violate any written DISTRICT policies.

11.7 Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of any third party against the DISTRICT.

11.8 The DISTRICT and CONTRACTOR, respectively, bind themselves, their partners, officers, successors, assigns and legal representatives to the other party to this Agreement with respect to the terms of this Agreement. CONTRACTOR shall not assign this Agreement.

11.9 This Agreement shall be governed by the laws of the State of California.

11.10 This Agreement represents the entire Agreement between the DISTRICT and CONTRACTOR and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended or modified only by an agreement in writing signed by both the DISTRICT and the CONTRACTOR.

11.11 This Contract shall be liberally construed to effectuate the intention of the PARTIES with respect to the transaction described herein. In determining the meaning of, or resolving any ambiguity with respect to any word, phrase or provision of this Contract, neither this Contract nor any uncertainty or ambiguity herein will be construed

or resolved against either party (including the PARTY primarily responsible for drafting and preparation of this Contract), under any rule of construction or otherwise, it being expressly understood and agreed that the PARTIES have participated equally or have had equal opportunity to participate in the drafting hereof.

11.12 CONTRACTOR, in the performance of this Contract, shall be and act as an independent contractor. CONTRACTOR understands and agrees that CONTRACTOR and all of CONTRACTOR's employees shall not be considered officers, employees or agents of the DISTRICT, and are not entitled to benefits of any kind or nature normally provided employees of the DISTRICT and/or to which DISTRICT's employees are normally entitled, including, but not limited to, State Unemployment Compensation or Worker's Compensation. CONTRACTOR assumes the full responsibility for the acts and/or omissions of CONTRACTOR's employees or agents as they relate to the work and/or services to be provided under this Contract. CONTRACTOR shall assume full responsibility for payment of any applicable prevailing wages and all federal, state and local taxes or contributions, including unemployment insurance, social security and income taxes for the respective CONTRACTOR's employees.

11.13 If either PARTY becomes involved in litigation arising out of this Contract or the performance thereof, each PARTY shall bear its own litigation costs and expenses, including reasonable attorney's fees.

11.14 All exhibits referenced herein and attached hereto shall be deemed incorporated into and made a part of this Agreement by each reference as though fully set forth in each instance in the text hereof. The parties agree that the terms of this AGREEMENT shall be controlling over any of the terms contained within any Exhibit(s) attached hereto.

11.15 The Contract entered into by this Agreement consists of the following Contract Documents, all of which are component parts of the Contract as if herein set out in full or attached hereto:

1. Bid Proposal Form
2. Designation of Subcontractors
3. Bid Bond
4. Bid Guarantee Form
5. Non-Collusion Declaration
6. Request for Substitution at Time of Bid
7. Acknowledgment of Bidding Practices Regarding Indemnity
8. Contractor's Certificate Regarding Workers Compensation
9. Contractor's Certificate Regarding Drug-Free Workplace
10. Contractor's Certificate Regarding Alcoholic Beverage and Tobacco-Free Campus Policy
11. Statement of Intent to Meet DVBE, WBE, and/or MBE Participation Goals
12. Construction Services Agreement Form
13. Labor & Material Payment Bond
14. Performance Bond
15. Escrow Agreement for Security Deposits in Lieu of Retention
16. Prevailing Wage Certification
17. Workmanship/Material Guarantee Form
18. Insurance Endorsements
19. Asbestos & Other Hazardous Materials Certification
20. Attachment A-Scope of Work
21. Attachment B-Drawings/Plan
22. All Addenda as Issued

All of the above named Contract Documents are intended to be complementary. Work required by one of the above named Contract Documents and not by others shall be done as if required by all.

IN WITNESS WHEREOF, this Agreement has been duly executed by the above named parties, on the day and year first above written.

CONTRACTOR

MT. SAN JACINTO COMMUNITY COLLEGE  
DISTRICT

By:

By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Phone: \_\_\_\_\_  
E-Mail: \_\_\_\_\_  
Tax ID: \_\_\_\_\_

\_\_\_\_\_  
Beth Gomez, Vice President Business Services  
Date: \_\_\_\_\_

(CORPORATE SEAL)

**PAYMENT BOND**  
**(CALIFORNIA PUBLIC WORK)**

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the \_\_\_\_\_ DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to \_\_\_\_\_ (hereinafter designated as the "Contractor"), an agreement for the work described as follows: \_\_\_\_\_ (hereinafter referred to as the "Public Work"); and

WHEREAS, said Contractor is required to furnish a bond in connection with said Contract, and pursuant to California Civil Code Section 9550;

NOW, THEREFORE, We, \_\_\_\_\_, the undersigned Contractor; and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the \_\_\_\_\_ DISTRICT and to any and all persons, companies, or corporations entitled by law to file stop notices under California Civil Code Section 9100, or any person, company, or corporation entitled to make a claim on this bond, in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), such sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code Section 9100; or fail to pay for any materials, provisions, or other supplies, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code, with respect to work or labor thereon of any kind; or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Unemployment Insurance Code Section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code Section 9550 et seq.

This bond shall inure to the benefit of any person named in Civil Code Section 9100 giving such person or his/her assigns a right of action in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or pertaining or relating to the furnishing of labor, materials, or equipment therefor; nor by any change or modification of any terms of payment or extension of time for payment pertaining or relating to any scheme or work of improvement herein above described; nor by any rescission or attempted rescission of the contract, agreement or bond; nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond; nor by any fraud practiced by any person other than the claimant seeking to recover on the bond; and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given; and under no circumstances shall the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Obligee and the Contractor or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California Civil Code Section 9100, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

IN WITNESS WHEREOF this instrument has been duly executed by the Principal and Surety above named, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

CONTRACTOR:

By:  
SURETY:

By:

Attorney-in-Fact

Page Break **IMPORTANT: THIS IS A REQUIRED FORM.**

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service for service of process in California)

Telephone:

Telephone:

A notary public or other office completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA )

) ss.

COUNTY OF )

On \_\_\_\_\_, before me, \_\_\_\_\_, personally appeared \_\_\_\_\_, who proved on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) as the Attorney-in-Fact of \_\_\_\_\_ (Surety) and acknowledged to me that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(SEAL)

Notary Public in and for said State

Commission expires:

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.

**PERFORMANCE BOND**  
**(CALIFORNIA PUBLIC WORK)**

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the \_\_\_\_\_ DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to \_\_\_\_\_ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: \_\_\_\_\_ (hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in that certain contract for said Public Work dated \_\_\_\_\_, (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the Contractor is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, \_\_\_\_\_, the undersigned Contractor, as Principal, and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the \_\_\_\_\_ DISTRICT in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the bounded Contractor, his or her heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said Contract and any alteration thereof made as therein provided, on his or her part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill guarantees of all materials and workmanship; and indemnify, defend and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any change, extension of time, alteration in or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same, nor by any change or modification to any terms of payment or extension of time for any payment pertaining or relating to any scheme of work of improvement under the contract. Surety also stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any overpayment or underpayment by the Obligee that is based upon estimates approved by the Architect. The Surety stipulates and agrees that none of the aforementioned changes, modifications, alterations, additions, extension of time or actions shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, modifications, alterations, additions or extension of time to the terms of the contract, or to the work, or the specifications as well notice of any other actions that result in the foregoing.

Whenever Principal shall be, and is declared by the Obligee to be, in default under the Contract, the Surety shall promptly either remedy the default, or shall promptly take over and complete the Contract through its agents or independent contractors, subject to acceptance and approval of such agents or independent contractors by Obligee as hereinafter set forth, 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 and the payment of liquidated damages; or, at Obligee's sole discretion and election, Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Obligee of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as Work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the "balance of the Contract Price" (as hereinafter defined), 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. The term "balance of the Contract price," as used in this paragraph, shall mean the total amount payable to Principal by the Obligee under the Contract and any modifications thereto, less the amount previously paid by the Obligee to the Principal, less any withholdings by the Obligee allowed under the Contract. Obligee shall not be required or obligated to accept a tender of a completion Contractor from the Surety.

Surety expressly agrees that the Obligee may reject any agent or contractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal. Unless otherwise agreed by Obligee, in its sole discretion, Surety shall not utilize Principal in completing the Contract nor shall Surety accept a bid from Principal for completion of the work in the event of default by the Principal.

No final settlement between the Obligee and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

The Surety shall remain responsible and liable for all patent and latent defects that arise out of or relate to the Contractor's failure and/or inability to properly complete the Public Work as required by the Contract and the Contract Documents. The obligation of the Surety hereunder shall continue so long as any obligation of the Contractor remains.

Contractor and Surety agree that if the Obligee is required to engage the services of an attorney in connection with enforcement of the bond, Contractor and Surety shall pay Obligee's reasonable attorneys' fees incurred, with or without suit, in addition to the above sum.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including reasonable attorneys' fees to be fixed by the Court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

CONTRACTOR:

By:  
SURETY:

By: \_\_\_\_\_ Attorney-in-Fact

The rate of premium on this bond is \_\_\_\_\_ per thousand.

The total amount of premium charged: \$ \_\_\_\_\_ (This must be filled in by a corporate surety).

Page Break

**IMPORTANT: THIS IS A REQUIRED FORM.**

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:  
(Name and Address of Surety)

(Name and Address of agent or representative for service for  
service of process in California)

Telephone:

Telephone:

A notary public or other office completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA )

) ss.

COUNTY OF )

On \_\_\_\_\_, before me, \_\_\_\_\_, personally appeared \_\_\_\_\_, who proved on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) as the Attorney-in-Fact of \_\_\_\_\_ (Surety) and acknowledged to me that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(SEAL)

Notary Public in and for said State

Commission expires:

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto

## SCOPE OF WORK FOR LABOR AND MATERIALS

### INFORMAL BID NO. 2022-001 MAKERSPACE CONVERSION AT SAN JACINTO CAMPUS

#### 1. Bid Timeline

1.1 BID Timeline. The District anticipates that the following activities relating to the BID will be completed at the times noted below. The foregoing notwithstanding, the District reserves the right to modify BID activities and/or the time for completion of a BID activity.

BID Activity	Date
Bid Issued	September 23, 2021
Mandatory Job Walk – no later than	September 28, 2021 @ 10:00 a.m.
Latest date/time for submittal of questions, clarification requests	October 1, 2021 @ 5:00 p.m.
Bid Submittal	<b>October 12, 2021 @ 2:00 p.m.</b>

#### 2. The District

2.1 The District. Mt. San Jacinto Community College District is a fast growing community college system in the inland southern California region serving a 1,700 square mile area from the San Geronio Pass to Temecula. We serve students throughout this region from the San Jacinto, Menifee Valley, Temecula, and San Geronio Pass campuses and many off-site locations.

The District is a single-college multi-campus District with over 26,000 Students.

#### 3. Scope of Work.

3.1 Contractors' License Classification. Pursuant to California Public Contract Code §3300, the District requires that Bidders possess the needed classification(s) of California Contractors License(s) **B – General Building** at the time that the Contract for the Work is Awarded. Respondents are asked to include copies of their license(s) with their completed proposals.

3.2. Project Description: Provide all labor, equipment, and miscellaneous materials to install District furnished and CMAS purchased roof restoration products over the properly prepared existing roof substrate for Mt. San Jacinto Community College District. The installer shall be financially responsible for the materials that are not supplied by the District and The

Garland Company, and all labor to install the specified roofing system. See additional details under section 3.11 of this specification.

3.3 **See attached Project Manual for scope of work and drawings**

4. **BID Response.**

4.1 Submission of BID Response.

4.1.1 Latest Date/Time for Submission of BID Response is:

**Tuesday, October 12, 2021 at 2:00 p.m.**

4.1.2 Location for Submission of BID Response:

Only sealed bids will be accepted at this time due to the COVID-19 Pandemic. Sealed bids may be mailed to address below. Or dropped off in-person to the following address, during the specific drop-off dates and times ONLY:

**Bid drop-off date/times: October 11 and 12, 2021 8:00am-2:00pm**

Address to:

Mt. San Jacinto College  
Purchasing Office, Bldg. AA  
Attn: Tammy Cunningham  
1499 N. State Street  
San Jacinto, CA 92583

Clearly note BID number and name on the outside of bid package as follows:

**“Bid No. 2022-001 Makerspace Conversion at San Jacinto Campus”**

BID Responses which are not actually received at the above-stated location at or prior to the latest date/time for submission of the BID Responses will be rejected by the District for non-responsiveness. Late responses will be returned to the Respondent unopened and noted that the response was received late. Respondents are solely responsible for the timely submission of BID Responses. Please take notice that no electronic e-mail or faxed responses will be permitted or accepted. Respondents are advised that the District utilizes a central mailroom for the receipt of items transmitted by U.S. Post Office and private courier services, including FedEx, On-Trac, DHL, UPS, etc. Items received in the District’s central mailroom will be distributed to the addressee(s) only as part of the mailroom’s regular routine delivery service. A response to this BID which is received in the District’s central mailroom is not receipt by the Purchasing Office until the delivery of such item is effectuated to the Purchasing Office by the District’s mailroom services.

4.1.3 BID Response. The written responses to this BID will be submitted in one original copy, and one electronic copy on a USB Flash Drive (optional).

4.1.4 Additional Materials. Respondents are not prohibited from submitting extra information not specifically requested in this BID.

4.2 BID Documents. In addition to this BID, these forms must be part of the returned BID:

- Attachment 1 Bid Form
- Attachment 2 Non-Collusion Affidavit
- Attachment 3 Hold Harmless Agreement
- Attachment 4 Workers' Compensation
- Attachment 5 Designated Subcontractors List
- Attachment 6 Request for Substitution at Time of Bid
- Attachment 7 Acceptance of Guarantee
- Attachment 8 Prevailing Wage Certification
- Attachment 9 Certificate Regarding Drug-Free Workplace
- Attachment 10 Certificate Regarding Alcoholic Beverage and Tobacco-Free Campus Policy
- Attachment 11 Acknowledgement of Bidding Practices Regarding indemnity
- Attachment 12 Statement of Intent to meet DVBE Participation Goals
- Attachment 13 Bid Bond

4.2.5 Insurance Certificates. Provide copies of Certificates of Insurance for the Respondent; required Certificates of Insurance and minimum coverage amounts for each policy of insurance are as set forth in the following:

Policy of Insurance	Minimum Coverage Amount
Workers' Compensation	In accordance with law
Employers' Liability	\$2,000,000 (twomillion dollars)
Commercial General Liability	\$2,000,000 (two million dollars) per occurrence and \$2,000 (two million dollars) in the aggregate.
Automobile Liability	\$1,000,000 (One million dollars) combined single limit.

4.2.6 Agreement Comments. Respondents must indicate acceptance of all terms and conditions of the Agreement, without conditions, qualifications or reservations or identify any term or condition of the Agreement which the Respondent requests modification, by amendment to existing provisions, addition of additional provisions or deletion of existing provisions. Where requested modification are consists of amendments to existing provisions or additional provisions, the BID response must set forth the complete text

of the requested amendment or addition. Any Respondent who's BID Response does not identify modifications to terms or conditions of the attached Agreement will be deemed to have agreed to and accepted all terms and conditions set forth therein, if the Respondent is awarded the Agreement.

- 4.2.7 Acknowledgment of Addenda. If the District issued addenda to the BID, Respondent must indicate the following statement within the official response to the BID:

*“The Respondent submitting this BID Response acknowledges receipt of Addenda Numbers. \_\_\_\_, \_\_\_\_, \_\_\_\_, and \_\_\_\_. The Respondent confirms that requirements noted in the foregoing Addenda are incorporated into the BID Response.”*

If the District does not issue addenda to the BID, please indicate *“No Addenda Issued.”*

## **5. Award of Contract**

- 5.1 Waiver of Irregularities or Informalities. The District reserves the right to reject any and all Bid Proposals or to waive any irregularities or informalities in any Bid Proposal or in the bidding.
- 5.2 Award to Lowest Responsive Responsible Bidder. The award of the Contract will be to the responsible Bidder submitting the lowest responsive Bid Proposal on the basis of the Base Bid Proposal or the Base Bid Proposal and Alternate Bid Items, if any, selected in accordance with these Instructions for Bidders.
- 5.3 Alternates: If alternate bids are called for, the Contract may be awarded at the election of Governing Board to the lowest responsible and responsive bidder using the method and procedures outline in the Notice Inviting Bids and as specified in the section entitled Alternate/Deductive Bid Alternates.
- a. Subcontractor Listing for Alternates. If alternate bids are called for and the bidder intends to use different or additional subcontractors, a separate list of subcontractors must be submitted for each alternate.
- 5.4 Responsive Bid Proposal. A responsive Bid Proposal shall mean a Bid Proposal which conforms, in all material respects with the Bid and Contract Documents
- 5.5 Responsible Bidder. A responsible Bidder is a Bidder who has the capability in all respects, to perform fully the requirements of the Contract Documents and the moral and business integrity and reliability which will assure good faith performance. In determining responsibility, the following criteria will be considered: (i) the ability, capacity and skill of the Bidder to perform the Work of the Contract Documents; (ii) whether the Bidder can

perform the Work promptly and within the time specified, without delay or interference; (iii) the character, integrity, reputation, judgment, experience and efficiency of the Bidder; (iv) the quality of performance of the Bidder on previous contracts, by way of example only, the following information will be considered: (a) the administrative, consultant or other cost overruns incurred by the District on previous contracts with the Bidder; (b) the Bidder's compliance record with contract general conditions on other projects; (c) the submittal by the Bidder of excessive and/or unsubstantiated extra cost proposals and claims on other projects; (d) the Bidder's record for completion of work within the contract time and the Bidder's compliance with the scheduling and coordination requirements on other projects; (e) the Bidder's demonstrated cooperation with the District and other contractors on previous contracts; (f) whether the work performed and materials furnished on previous contracts was in accordance with the Contract Documents; (v) the previous and existing compliance by the Bidder with laws and ordinances relating to contracts; (vi) the sufficiency of the financial resources and ability of the Bidder to perform the work of the Contract Documents; (vii) the quality, availability and adaptability of the goods or services to the particular use required; (viii) the ability of the Bidder to provide future maintenance and service for the warranty period of the Contract; (ix) whether the Bidder is in arrears on debt or contract or is a defaulter on any surety bond; (x) such other information as may be secured by the District having a bearing on the decision to award the Contract, to include without limitation the ability, experience and commitment of the Bidder to properly and reasonably plan, schedule, coordinate and execute the Work of the Contract Documents and whether the Bidder has ever been debarred from bidding or found ineligible for bidding on any other projects. The ability of a Bidder to provide the required bonds will not of itself demonstrate responsibility of the Bidder. Upon request of the District, Bidder must promptly submit satisfactory evidence of any of the items listed above.

**[END OF SECTION]**

# PROJECT MANUAL

MT. SAN JACINTO  
COMMUNITY COLLEGE DISTRICT

MAKERSPACE CONVERSION – SAN JACINTO CAMPUS

SAN JACINTO, CA



ARCHITECTS

707 Brookside Avenue  
Redlands, CA 92373  
(909) 375-3030

SEPTEMBER 2021



**MAKERSPACE CONVERSION – SAN JACINTO CAMPUS  
MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT**

**TABLE OF CONTENTS**

**DIVISION 1 GENERAL REQUIREMENTS**

01 10 00	SUMMARY OF WORK
01 21 00	ALLOWANCES
01 23 00	ALTERNATES
01 26 10	REQUESTS FOR INFORMATION (RFI)
01 30 10	CONSTRUCTION DETAILING ACTIVITY & BUILDING INFORMATION MODELING
01 31 19	COORDINATION AND MEETINGS
01 32 00	PROJECT CONSTRUCTION SCHEDULE
01 33 00	SUBMITTALS
01 35 00	SAFETY PROGRAM
01 45 00	QUALITY CONTROL
01 45 29	TESTING LABORATORY SERVICES
01 50 00	CONSTRUCTION FACILITIES
01 56 00	TEMPORARY CONTROLS
01 60 00	MATERIALS AND EQUIPMENT
01 64 00	STORM WATER POLLUTION PREVENTION
01 71 23	FIELD ENGINEERING
01 73 00	ALTERATIONS PROJECT PROCEDURES
01 73 29	CUTTING AND PATCHING
01 73 99	ROOF OPENING AND UTILITY SHUTDOWN, TIE-IN
01 74 19	CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
01 74 19.1	CONSTRUCTION WASTE REDUCTION PROGRESS REPORT AND FORMS
01 75 00	STARTING OF SYTEMS
01 78 00	WARRANTIES AND BONDS
01 78 39	CONTRACT CLOSEOUT

**DIVISION 2 EXISTING CONDITIONS**

02 41 19	SELECTIVE DEMOLITION
----------	----------------------

**DIVISION 7 THERMAL AND MOISTURE PROTECTION**

07 25 00	WEATHER BARRIERS
07 84 13	PENETRATION FIRESTOPPING
07 92 00	JOINT SEALANTS

**DIVISION 8 OPENINGS**

08 71 00	DOOR HARDWARE
----------	---------------

**DIVISION 9 FINISHES**

09 22 36	LATH
09 24 00	CEMENT PLASTERING
09 29 00	GYPSUM BOARD
09 65 13	RESILIENT BASE AND ACCESSORIES

09 65 19 RESILIENT TILE FLOORING  
09 65 36 STATIC DISSIPATIVE RESILIENT FLOORING  
09 90 00 PAINTING

**DIVISION 10 SPECIALTIES**

10 14 00 SIGNAGE  
10 44 13 FIRE PROTECTION & FIRE EXTINGUISHERS

**DIVISION 12 FURNISHINGS**

12 24 13 WINDOW ROLLER SHADES

SECTION 01 10 00 – SUMMARY OF WORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. The District may have separate contracts with other Contractors, vendors, suppliers, or entities to perform Work on the Project. This may include, but is not limited to Multi-Prime Trade Contractors, furniture installers, testing agencies, clean-up contractors, or network or low voltage contractors. Contractor shall plan for certain other contractors that may also be working on the Project site and address these other contractors.
- B. The District will be monitoring the progress of the construction, reviewing and monitoring the schedule, progress of work, monitoring pay requests, facilitating communications, advising the District and its Board of Education on various aspects of the construction process, monitoring the RFI, COR, CCD, ICD, RFP, Claims, Disputes and other Project related processes. All communications regarding the Project shall be done through the CM and any communications related to the Project shall copy the CM.
- C. This project will have the following Bid Categories:
- D. The Contractor shall continually supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures; and shall coordinate all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. The Contractor shall not perform the Work without utilizing the Contract Documents or, where required, approved Submittals, Shop Drawings, or samples for any such portion of the Work. If any of the Work is performed by contractors retained directly by the District, Contractor shall be responsible for the coordination and sequencing of the work of those other contractors so as to avoid any impact on the Project Schedule.
  - 1. It is the duty of the Contractor to complete the Work covered by his or her Contract in accordance with the approved Plans and Specifications. The Contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Construction Manager, Inspector or DSA in the performance of their duties.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 SCOPE OF WORK SUMMARY

- A. Refer herein to the scope of work summary for each bid Category

**SECTION 01 10 00  
SUMMARY OF WORK**

- B. The breakdown of the scope of work by specifications is for organizational purposes only.
- C. The scope noted within each respective scope of work summary provides additional clarity only. It is not necessarily all inclusive. Where there is a reference to a detail, plan sheet or a note, this is to bring awareness only. Unless specifically “excluded”, this Contractor has the entire scope of work.
- D. The scope, regardless if duplicated in another’s scope of work and other contract documents, shall be included in each Bid Category Contractor’s base bid. In the event a scope item is duplicated in another Contractor’s scope of work and/or and other contract documents, this does not relieve this Contractor from the responsibility of the scope. It shall be the Construction Manager’s discretion as to which Contractor will perform the scope of work and who shall provide a credit for the value of the scope not provided.

**END OF SECTION**

**SECTION 01 21 00 - ALLOWANCES**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Submission procedures.
- B. Change Procedures.
- C. Schedule of Allowances.

**1.2 RELATED SECTIONS**

- A. Bid Form: The monetary value of scheduled allowance is to be included in bidders Total Cash Purchase Price of the Bid Form.

**1.3 REQUIREMENTS**

- A. The Base Bid shall include the monetary value of any scheduled allowances to base bid price as set forth below.
- B. Approved Change Order Items which occur during the course of construction shall be deducted from the allowance set forth for each CONTRACTOR/ Category.
- C. Change Items will be processed as described in the General Conditions of the Contract and will be included in a formal Change Order. All Change Orders must be signed by the ARCHITECT, OWNER, and CONTRACTOR and approved by Division of the State Architect ("DSA") prior to fabrication or use.
- D. Any portion of the allowance remaining at the end of the project shall be credited to the DISTRICT via a Change Order. CONTRACTOR shall not deduct any costs including, but not limited to, bond costs, overhead and profit, or other indirect costs when returning any unused allowance amount.
- E. Allowances shall be listed as a separate line item when submitting the schedule of values.

**1.4 SCHEDULE OF ALLOWANCES**

- A. Not applicable

END OF SECTION



**SECTION 01 23 00 – ALTERNATES**

**GENERAL – PART 1**

**1.1 SECTION INCLUDES**

- A. Submission procedures.
- B. Documentation of changes to Contract Sum/Price and Contract Time.

**1.2 RELATED SECTIONS**

- A. Proposal Form: Incorporating monetary value of proposed alternates.
- B. Agreement Between DISTRICT and CONTRACTOR Form: Incorporating monetary value of accepted Alternates.

**1.3 REQUIREMENTS**

- A. Indicate variation of Bid Price for Alternates described below and list in the Proposal any supplement to it, which requests a “difference” in Bid Price by [adding to] or [deducting from] the base bid price.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.
- C. Alternates quoted in the Proposal will be reviewed and accepted or rejected as stated in the Notice Inviting Bids. Accepted Alternates will be identified in the Notice of Award.

**1.4 SELECTION AND AWARD OF ALTERNATES**

- A. Once the lowest responsible Bidder has been selected, the DISTRICT may determine to add to or deduct from the Contract any of the additive or deductive items in accordance with the Information for Bidders.

**1.5 SCHEDULE OF ALTERNATES**

- A. Not applicable

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

END OF SECTION

SECTION 01 26 10 - REQUESTS FOR INFORMATION (RFI)

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Administrative requirements for Requests for Information (RFI).

1.2 DEFINITIONS

- A. Request for Information:
1. Written request prepared by CONTRACTOR requesting additional information necessary to clarify an item which he believes is not clearly shown or called for in the drawings or specifications, or to address problems which have arisen under field conditions, hereinafter referred to as RFI.
  2. Properly prepared request for information shall include detailed written statement that indicates specific Drawings or Specification in need of clarification and nature of clarification requested.
    - a. Drawings shall be identified by Drawing number and location on Drawing sheet.
    - b. Specifications shall be identified by Section number, page and paragraph.
  3. CONTRACTOR'S documents with similar titles, such as "Request for Interpretation" or "Request for Clarification" shall be considered RFIs.
  4. RFIs and ARCHITECT'S responses are not Changes in the Work; if a Change in the Work is required in response to an RFI, separate documents shall be issued in accordance with the General Conditions.
- B. Improper RFIs:
1. RFIs that are not properly prepared or incomplete.
  2. Improper RFIs will be processed by ARCHITECT at ARCHITECT'S standard hourly rate and ARCHITECT will charge Owner, and such costs will be deducted from moneys still due the CONTRACTOR. ARCHITECT will notify CONTRACTOR before processing of improper RFIs.
- C. Frivolous RFIs:
1. RFIs that request information that is clearly shown on Contract Documents.
  2. Frivolous RFIs may be returned unanswered or may be processed by ARCHITECT at ARCHITECT'S standard hourly rate and ARCHITECT will charge Owner, and such costs will be deducted from moneys still due CONTRACTOR. ARCHITECT will notify CONTRACTOR before processing of frivolous RFIs.

**1.3 REQUEST FOR INFORMATION PROCESS**

- A. When the CONTRACTOR is unable to determine from Contract Documents, material, process or system to be installed, ARCHITECT will be requested to make clarification of indeterminate item.
- B. CONTRACTOR shall endeavor to keep number of RFIs to a minimum. In the event the process becomes unwieldy, in the opinion of ARCHITECT, because of number and frequency of RFIs submitted, the ARCHITECT may require the CONTRACTOR to abandon process and submit future requests as either submittals, substitutions or requests for change.
- C. RFIs shall be submitted on form acceptable to ARCHITECT. Forms shall be completely filled in, and if prepared by hand, shall be fully legible after photocopying or transmission by facsimile (fax) or e-mail scan. Each page of attachments to RFIs shall bear RFI number.
- D. RFI's shall be originated by CONTRACTOR:
  - 1. RFIs from subcontractors or material suppliers shall be submitted through, reviewed by, and signed by CONTRACTOR before submittal to ARCHITECT.
  - 2. RFIs sent by subcontractor or suppliers directly to ARCHITECT or ARCHITECT'S consultants shall not be accepted and will be returned unanswered.
- E. CONTRACTOR shall carefully study Contract Documents to ensure that requested information is not available therein. RFIs which request information available in Contract Documents will be deemed "improper" or "frivolous" as noted above.
- F. In cases where RFIs are issued to request clarification of coordination issues, for example pipe and duct routing, clearances, specific locations of Work shown diagrammatically, and similar items, CONTRACTOR shall endeavor to provide a suggested solution using drawings or sketches drawn to scale, and submit same with RFI.
  - 1. CONTRACTORS are encouraged to utilize photocopies of Contract Documents to completely illustrate their questions, and to provide sketches as required to communicate question, concepts and suggestions.
- G. Do not use RFIs for following purposes:
  - 1. To request approval of submittals or substitutions.
  - 2. To request changes which entail additional cost or credit.
  - 3. To request changes which entail change of time of completion.
  - 4. To request different methods of performing Work than those drawn and specified.

- H. In event CONTRACTOR believes that clarification by ARCHITECT results in additional cost or time, CONTRACTOR shall not proceed with Work indicated by RFI until Change Order or Construction Change Directive is prepared and approved. RFIs shall not automatically justify cost increase in Work or change in project schedule.
  - 1. Answered RFIs shall not be construed as approval to perform extra Work.
  - 2. Unanswered RFIs will be returned with stamp or notation: Not Reviewed.
- I. CONTRACTOR shall prepare and maintain log of RFIs, and at any time requested by ARCHITECT, CONTRACTOR shall furnish copies of log showing outstanding RFIs. CONTRACTOR shall note unanswered RFIs in log.
- J. CONTRACTOR shall allow up to seven (7) days review and response time for RFIs, however, ARCHITECT will endeavor to respond in timely fashion to RFIs.

#### 1.4 ARCHITECT'S RESPONSE TO RFIs

- A. ARCHITECT will respond to RFIs on one of following forms:
  - 1. Properly prepared RFIs:
    - a. If no Change in the Work is required, ARCHITECT will respond in space provided on the RFI form.
    - b. If a Change in the Work is required, ARCHITECT will issue change documents in accordance with the Contract.
  - 2. Improper or Frivolous RFIs:
    - a. Notification of Processing Fee(s).
    - b. Unanswered RFIs will be returned with stamp or notation: "NotReviewed".

#### PART 2 – PRODUCTS

NOT USED

#### PART 3 - EXECUTION

##### 3.1 FORM

- A. Use RFI form herein

RFI FORM

PROJECT NAME:	<Project Name>		
PROJECT NUMBER:	<Project Number>		
TO:	_____ & <Project Manager Name>	EMAIL:	_____ &

DATE:			
FROM:		EMAIL:	
DOCUMENT/DIVISION NUMBER:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:
RESPONSE TO CLARIFICATION:

END OF SECTION

SECTION 01 30 10 - CONSTRUCTION DETAILING ACTIVITY & BUILDING INFORMATION MODELING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Summary / Administrative Requirements
- B. Trade Participation
- C. BIM Requirements

1.2 SUMMARY / ADMINISTRATIVE REQUIREMENTS

- A. The Construction Detailing Activity (CDA) is a project coordination program to confirm aspects of the project's design in an orderly and systematic way.
- B. The basis of the CDA is to assure that all utilities, architectural, and structural building systems are inter-coordinated and agreed upon by Contractor, their Subcontractors and related Trade Contractors, before Work begins in the field.
  - 1. Coordinate the interrelationship of major system assemblies by Contractors and their relationship with the Work.
  - 2. Coordinate the Work of Contractors so that portions of the Work are performed in a manner that minimizes interference with the progress of the Work.
  - 3. Establishes the protocols, expected levels of development and authorized uses of Building Information Models on this Project.
  - 4. Do not obstruct spaces and installations that are required to be clear by Applicable Code Requirement.
  - 5. Components of construction, building lines, building floor elevations, and other details of the Work shall be accurately laid out within the tolerances specified for type of Work and materials indicated. Contractor shall require use of established lines and elevations for all Work.
- C. The coordination effort will be utilizing 3D Building Information Modeling (BIM)
  - 1. Specific Prime Contractors are required to produce, submit and coordinate their scope of work utilizing digital/computer based three dimensional models commonly referred to as Building Information Modeling (BIM).
- D. The purpose of the BIM CDA is to expeditiously produce fully coordinated shop drawings showing a composite of systems, subsystems, along with architectural and structural elements prior to fabrication of building systems.

- E. At the completion of the CDA, affected Contractors are required to sign off their acceptance indicating that the Work represented in the BIM and its resulting coordinated shop drawings is constructible and has been reviewed by them and that they are in concurrence with information contained on the drawings.
  
- F. Level of Development (LOD) is "LOD 400".
  - 1. The Model element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic or non-geometric information may also be attached to the Model Element.

### **1.3 PRIME CONTRACTOR PARTICIPATION**

- A. The following Prime Contractors required to participate utilizing 3D BIM are:
  - 1. Not Required
- B. All Prime Contractors regardless if not involved with 3D BIM are required to coordinate their Work with all other Trades. Coordination efforts are required for, but not limited to:
  - 1. Interior and exterior wall / partition stud framing.
  - 2. Utility coordination with architectural and structural work.
  - 3. Underground utility coordination with proposed and existing underground utilities.
  - 4. Coordination of all building elements.

### **1.4 BIM REQUIREMENTS**

- A. General Provisions: The deliverable Model shall be developed to include the systems described below as they would be built and the process of installing them into the new or remodeled facility.
  - 1. Architectural – Walls (both interior, exterior and soffits), Ceilings, Doors, Roofs, Vertical circulation components (including shaft openings). Permanent (non-movable) casework and furniture as applicable. General ceiling access panels. Trade specific access panels to be provided in the individual trade models as required for service access.
  - 2. Structural Concrete – Structural concrete walls, foundations, columns, beams, grade beams, slab on grade, and elevated decks. All floors and decks shall be modeled complete with edge of slab condition and slab depressions. Foundations

## CONSTRUCTION DETAILING ACTIVITY &amp; BUILDING INFORMATION MODELING

shall include all stepped footings, slab edge conditions and continuous perimeter footings where applicable. Structural concrete openings for MEPF trades shall be included.

3. Structural & Misc. Steel – All steel columns, primary and secondary framing members and steel bracing for the roof and floor systems (including decks). Structural connections and plates shall be included. Supplemental steel to support MEP trade systems shall be modeled according to layout information provided by responsible trade. Steel stair assemblies and supporting members shall be included.
4. HVAC – All heating, ventilating, air-conditioning and specialty equipment, including air distribution ducts for all systems. Include control system equipment, registers, diffusers, grilles, access doors and all mechanical piping (including refrigerant piping) larger than ½” diameter. Support systems for duct and piping are not required to be modeled but shall be reviewed for coordination, including hangers and seismic bracing at specified or code required locations and intervals. Any and all equipment or code required service/access clearances and support components for such equipment shall be modeled as a 3d element for use during clash detection.
5. Electrical and Low Voltage systems – All necessary electrical components, lighting fixtures, panel boards, distribution equipment, control boards and systems. Cable tray, and conduit rack systems shall be modeled. Individual conduits 2 inch diameter and larger shall be modeled. When specific specialty equipment requires detailed electrical points of connection, all necessary receptacles, junction boxes and any conduit shall be modeled for the purpose of coordination with the equipment manufacturer and other trades. Support systems for conduit and cable tray systems are not required to be modeled but shall be reviewed for coordination, including hangers and seismic bracing at specified or code required locations and intervals. Pendant mounted fixtures shall include specific support and sway bracing elements. Any and all equipment or code required service/access clearances shall be modeled as a 3d element for use during.
  - a. Other Communication and Notification systems – Communication, Audio/Visual and Notification (alarm) systems shall be provided with device locations at a minimum to allow coordination of ceiling and wall layouts with other trades.
6. Plumbing – All plumbing fixtures, equipment, piping, floor and area drains and related equipment. When specific equipment requires detailed plumbing points of connection, all necessary piping and connections shall be modeled for the purpose of coordination with the equipment manufacturer and other trades. Support systems for piping systems are not required to be modeled but shall be reviewed for coordination, including hangers and seismic bracing at specified or code required locations and intervals. Any and all equipment or code required service/access clearances and support components for such equipment shall be

**SECTION 01 30 10**  
**CONSTRUCTION DETAILING ACTIVITY & BUILDING INFORMATION MODELING**

modeled as a 3d element for use during clash detection.

7. Fire Sprinkler – All relevant fire protection components, branch piping, sprinkler heads, fittings, drains, pumps, tanks, sensors and control panels. Piping and equipment support systems shall be included, hangers, seismic bracing at specified or code required locations and intervals. Any and all equipment or code required service/access clearances shall be modeled as a 3d element for use during clash detection.

**PART 2 - PRODUCTS**

NOT

USED

**PART 3 – EXECUTION**

**3.1 CONTRACTOR COORDINATION RESPONSIBILITIES**

- A. Notwithstanding the information shown on the drawings and indicated in the specifications, Contractor fully recognizes that the contract drawings are only diagrammatic and are not intended to necessarily represent actual fit, tolerances, clearances, routing, or offsets required to achieve final coordination of systems or building components or to otherwise avoid conflicts between such components or systems. Contractor has adequately reviewed these documents to determine the degree of difficulty required on his part to achieve proper coordination and has allocated sufficient money and personnel (notwithstanding the minimum personnel requirements stipulated in the Contract) to accomplish the necessary coordination, fit and routing of systems or components. Construction Manager and the Architect are not responsible for the quality or content of Contractor's work.
- B. Certain portions of the Work may require engineering development or other engineering services by Contractor. Scope of services and other requirements shall be as indicated in technical specification sections.
  1. For portions of the Work specified for engineering development by Contractor's Professional Engineer, shop drawings, calculations, and other data shall be submitted bearing the California registration seal and self-written signature of the Contractor's Professional Engineer.
  2. Contractor's Professional Engineer shall review the material proposed by Contractor, related to the portions of Work requiring Contractor's engineering development, for conformance with the Contract Documents and for compliance with Contractor's Professional Engineer's own engineering design.
- C. Should contractor not participate or participate timely, any BIM related work will be performed on the Contractor's behalf at their expense at a cost of no less than \$200.00 /hour. In the event of a scenario of this kind, monthly reimbursement payment in full is to be made to the Construction Manager directly and is a condition of processing

**SECTION 01 30 10**  
**CONSTRUCTION DETAILING ACTIVITY & BUILDING INFORMATION MODELING**

Contractor monthly progress payment.

- D. The entire CDA process must take place in such a time as not to impact shop drawing preparation, material procurement, and the Project Schedule.

**3.2 MEETINGS**

A. Orientation Meetings

1. Prior to the start of the BIM CDA, meet with Construction Manager and Architect to discuss the coordination effort. The purpose of this meeting is to develop a mutual understanding of the administration of the CDA and the scope of the required BIM submittals and drawings. The Orientation Meeting must be attended by all affected Contractors as required in Section 1.03.

B. Coordination Meetings

1. BIM CDA meetings will be held weekly up to 100% completion of the CDA process.
  - a. During the BIM CDA meetings, spatial coordination software will be used for assembling the various trade models, providing a report and 3D views of trade coordination issues. The team will discuss and coordinate problems of fit, trade interfaces, and constructability.
  - b. Construction Manager and Architect will review and evaluate the routings and placements of the coordinated utilities for compliance with the original design intent only.
2. Upon 100% completion, there will be a 100% Complete meeting. The purpose of the 100% completion meeting is for all Contractors to sign the fully coordinated drawings indicating their full approval and that each Subcontractor has fully coordinated his work with the work of all Contractors.
3. Contractor may be required to attend additional coordination meetings as required at no additional expense to District. Contractor's subcontractors may be required to attend CDA meetings as necessary.
4. The provisions of this section do not lessen Contractor's responsibility for providing adequate coordination, including attendance at work site meetings as required by Tilden-Coil, for any and all work including work not indicated above.

**3.3 CONSTRUCTION DETAILING ACTIVITY (CDA) SEQUENCE**

- A. Review Contract Documents and prepare 3D BIM shop drawings in the sequence in which they are envisioned to be erected.

CONSTRUCTION DETAILING ACTIVITY & BUILDING INFORMATION MODELING

1. Coordination effort will include review of all construction documents for their completeness, constructability and code compliance. Failure to perform this satisfactorily will not be the basis for additional compensation after signing the coordination drawings.
- B. Prime Contractors required to participate shall make available, digital formats of their coordination progress drawings or BIM throughout the CDA process.
  1. The formats shall include 3D BIM and/or 2D CAD along with printable drawings (PDF) as agreed upon in the orientation meeting for clash detection
- C. Review of the clash model(s) will take place during Coordination Meetings.
  1. Team members will agree upon solutions to resolve conflicts and retain design intent of the contract documents.
  2. Contractors will implement these changes in the BIM prior to the next weekly meeting. Prime Contractors who are responsible for multiple scopes of work are expected to coordinate with their sub-tier contractor the clashes between those scopes within their model prior to the project coordination meetings
  3. This process will be repeated until all coordination issues have been resolved.
- D. All conflicts will be resolved through the CDA process rather than at the installation stage. Conflicts occurring at the installation stage will not be the basis for additional costs or time extensions. Issues shall be resolved via the CDA process and documented on the coordination drawings.
- E. Sign drawings indicating full coordination and fit of all new building systems: The end product of this effort will be a fully coordinated digital BIM and set of drawings, consistent with the design intent and applicable building codes, for the new work of the project. Upon the completion of the BIM and coordination drawings, Contractors will indicate they have coordinated their work by signing the coordination drawings. Upon completion of the CDA, shop Drawings and fabrication can proceed.

END OF SECTION

SECTION 01 31 19 COORDINATION AND MEETINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Post-bid interview
- B. Coordination
- C. Job start meeting
- D. Progress meetings
- E. Pre-installation conferences

1.2 POST BID INTERVIEW

- A. Each apparent low Bidder shall attend and participate in a POST BID INTERVIEW with the PROJECT MANAGER, prior to award of any contract by the DISTRICT. The POST BID INTERVIEW will be scheduled by the PROJECT MANAGER within three (3) calendar days after the date of bid. The Conditions of the Contract and all other Sections of the Contract apply to this Section as fully as if repeated herein.
- B. A duly authorized representative of the apparent low Bidder is required to attend the POST BID INTERVIEW, in person.
- C. The apparent low Bidder's authorized representative must have a clear understanding of the project requirements and have signatory authority on behalf of the apparent low Bidder.
- D. The PROJECT MANAGER will review the project requirements with the attendees, including but not limited to:
  - 1. The Contract Plans, Specifications.
  - 2. Addenda.
  - 3. Scope of Work.
  - 4. Alternates.
  - 5. Allowances.
  - 6. Value Engineering.
  - 7. The Construction Schedule, Milestones, and Award Dates.
  - 8. Critical Material Identification and Requirements.

E. POST BID INTERVIEW DOCUMENTATION

1. The PROJECT MANAGER will document the POST BID INTERVIEW on the form attached to this Section. Both the Apparent Low Bidder and the PROJECT MANAGER are required to sign the POST BID INTERVIEW Documentation. POST BID INTERVIEWS will be conducted at the Office of: TBD

**1.3 COORDINATION**

- A. Coordinate scheduling, submittals, and work of the various sections of the specifications to assure efficient and orderly sequence of installation of interdependent construction elements with provisions for accommodating items installed later.
- B. Prior to commencement of a particular type or kind of work, examine relevant information, Contract Documents and subsequent data issued to the project.
- C. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to and placing in service, such equipment.
- D. Coordinate space requirements and installation of mechanical and electrical work, which are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
- E. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. In locations where several elements of mechanical and electrical work must be sequenced and positioned with precision in order to fit into available space, prepare coordination drawings showing the actual conditions required for the installation. Prepare coordination drawings prior to purchasing, fabricating or installing of the elements required to be coordinated.
- G. Closing up of walls, partitions or furred spaces, backfilling and other covering up operations shall not proceed until all enclosed or covered work and inspections have been completed. Verify before proceeding.
- H. Coordinate completion and cleanup of work of separate sections in preparation for substantial completion (and for portions of work designated for DISTRICT'S full and/or partial occupancy).
- I. After DISTRICT occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract

Documents to minimize disruption of DISTRICT'S activities.

- J. Coordinate all utility company work in accordance with the General Conditions.

#### **1.4 JOB START MEETING**

- A. After the DISTRICT awards the public works contract, and prior to the commencement of the work, a mandatory Job Start meeting (Pre-Job conference) shall be conducted by the CONSTRUCTION MANAGER with the CONTRACTOR and those subcontractors listed in its bid documents.
- B. At that meeting, the Labor Compliance Program ("LCP"), as administered by the DIR, will be discussed, including the federal and state labor law requirements applicable to the contract, prevailing wage requirements, the respective recordkeeping responsibilities, the requirement for the submittal of certified payroll records to the DIR and CONSTRUCTION MANAGER and the prohibition against discrimination in employment.
- C. A Labor Law Requirements checklist may be provided to the CONTRACTOR and must be signed and returned to the CONSTRUCTION MANAGER.

#### **1.5 PROGRESS MEETINGS**

- A. CONSTRUCTION MANAGER will schedule and administer meetings throughout progress of the work at semi-weekly intervals or more frequently if needed.
- B. CONSTRUCTION MANAGER will make arrangements for meetings, prepare agenda, and preside at meetings. ARCHITECT will record minutes (Field Reports) and distribute copies.
- C. Attendance required: DISTRICT, ARCHITECT, INSPECTOR, and CONSTRUCTION MANAGER.
- D. Agenda:
  - 1. Review minutes of previous meetings (Field Reports).
  - 2. Review work progress.
  - 3. Field observations, problems and decisions.
  - 4. Identification of problems which impede planned progress.
  - 5. Review of submittals, schedule and status of submittals.
  - 6. Review of off-site fabrication and delivery schedules.
  - 7. Maintenance of progress schedule.
  - 8. Corrective measures to regain projected schedules.

9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Other business relating to work.

**1.6 PRE-INSTALLATION CONFERENCE**

- A. When required in individual specification section, convene a pre-installation conference prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify ARCHITECT through CONSTRUCTION MANAGER at least five (5) days in advance of meeting date.
- D. Prepare agenda, preside at conference, record minutes and distribute copies within two (2) days after conference to participants
- E. Review conditions of installation, preparation and installation procedures, and coordination with related work.

**1.7 CONTRACTOR COORDINATION MEETINGS**

- A. CONSTRUCTION MANAGER will schedule and administer weekly CONTRACTOR coordination meetings to review and facilitate coordination of the work.
- B. CONSTRUCTION MANAGER will make arrangements for meetings, prepare agenda, look-ahead schedules, areas where additional CONTRACTOR focus is required, and record minutes as required.
- C. Mandatory Attendees Required: CONSTRUCTION MANAGER, Inspector, and CONTRACTOR'S Superintendent.
- D. Agenda: As listed in 1.06 (D).

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

POST BID INTERVIEW FORM

PROJECT: Maker Space Conversion – San Jacinto Campus

CONSTRUCTION MANAGER:

CONTRACTOR/BIDDER:

---

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ PHONE: \_\_\_\_\_

I. INTRODUCTIONS: (SIGN  
BELOW) CONSTRUCTION  
MANAGER

_____ PRINT NAME	_____ SIGNATURE	_____ TITLE
CONTRACTOR		
_____ _____	_____ _____	_____ _____
_____ PRINT NAME	_____ SIGNATURE	_____ TITLE

II. PURPOSE OF INTERVIEWS IS TO ASSURE:

- A. Contractor acknowledgement of complete and accurate bid.
- B. Contractor acknowledgement of and understanding of the schedule requirements.
- C. Contractor acknowledgement of his scope of work assignments.

III. THE CONTRACT PLANS, SPECIFICATIONS:

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**IV. ADDENDA:**

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**V. SCOPE OF WORK:**

Review work scope with Contractor

A. Category Assignments:

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B. General Notes Applicable To All Categories:

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C. Logistics Plans:

---

D. Phasing Plans:

---

E. SWPPP Requirements:

---

F. Mitigation Measures:

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**VI. ALTERNATES:**

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

**VII. ALLOWANCES:**

A. \_\_\_\_\_

**VIII. VALUE ENGINEERING:**

1. The District may be interested in Value Engineering, do you have any obvious value engineering items that you would like to propose?

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**IX. THE CONSTRUCTION SCHEDULE, MILESTONES & AWARD DATES:**

- A. Do you have any comments or concerns about the Preliminary Baseline Schedule we should consider?

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**X. CRITICAL MATERIAL IDENTIFICATION & REQUIREMENTS:**

- A. Please identify critical materials, deliveries and dependencies, including Ownerfurnished items that could affect the completion of your work.

1.

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2.

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3.

---

4.

---

**XI. CONTRACTOR COMMENTS/SUGGESTIONS:**

1.

---

2.

---

3.

---

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

\_\_\_\_\_  
Project Manager

**END OF SECTION**

## SECTION 01 32 00 - PROJECT CONSTRUCTION SCHEDULE

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for a successful execution of the Work, as well as documenting the progress of construction during performance of the Work, which includes the following:
1. Notice to Proceed
  2. Construction Schedule
  3. Submittals
  4. Procurement / Fabrication / Delivery
  5. Daily Work Reports

#### 1.2 NOTICE TO PROCEED (NTP)

- A. NTP begins the start of administrative, early planning / coordination, submittals and procurement and fabrication, delivery and the start of construction.

#### 1.3 CONSTRUCTION SCHEDULE

- A. The "PROJECT CONSTRUCTION SCHEDULE", included in this specification is composed of tentative starting dates and fixed durations for major activities of work on the project. Not all activities have been shown. This DOES NOT relieve the CONTRACTOR from complying with the requirements of the schedule or initiating and coordinating their respective work as necessary in the proper sequencing of the Work.
- B. Actual start date will be established in the "Notice of Award" letter and will be reflected in the Baseline Schedule.
- C. Each CONTRACTOR will be required to provide the following details to the CONSTRUCTION MANAGER:
1. Proposed manpower loading of each scheduled field activity.
  2. Establish submittal lead times which will allow for the proper review time by the ARCHITECT without delaying the timely scheduled procurement of products, materials and/or assemblies.
  3. Establish fabrication and/or procurement lead times which will maintain that no operation will be delayed from its scheduled starting date.

4. Other requirements noted in General Conditions regarding the schedule.
  
- D. CONTRACTOR must coordinate all work with all other CONTRACTORS on the project through the CONSTRUCTION MANAGER'S Project Superintendent in order to complete each activity of their work within the fixed durations assigned to same as shown on the "Baseline Schedule".
  
- E. When the official start date has been established by the Notice to Award letter and inserted into the Baseline Schedule, start dates as shown on the Baseline Schedule shall be referred to as "tentative" only to the extent that said dates will be continually adjusted either forward or backward by the CONSTRUCTION MANAGER as the project progresses.
  1. Upon receipt of two (2) business day advanced notice by the CONSTRUCTION MANAGER to begin work on an activity, CONTRACTOR must properly man and perform the work of said activity and complete same within the noted number of consecutive working days or less assigned to said activity in the Baseline Schedule.
  
- F. CONTRACTOR is expected to continually monitor all phases of the project field construction progress in order to insure that CONTRACTOR'S work is properly implemented into the overall project improvements.
  
- G. CONTRACTOR is expected to provide properly trained and skilled mechanics in adequate numbers and equipment needed and/or required in order to properly and efficiently complete all work activities per the schedule. Should CONSTRUCTION MANAGER have reason to believe at any time that CONTRACTOR is not providing an adequate workforce armed with the proper materials and/or equipment, CONSTRUCTION MANAGER shall give CONTRACTOR written notice of same. Activity Manpower loading submitted shall in no way limit the responsibility of the CONTRACTOR to perform to the fixed duration requirements of the Final Baseline Schedule.
  
- H. CONSTRUCTION MANAGER may change the starting date of any activity within a two (2) business day notice to CONTRACTOR and CONTRACTOR shall mobilize and proceed with identified activity. CONTRACTORS must be prepared to provide adequate manpower to perform simultaneous functions as reflected in the progress schedule. Scheduled activities are tentative only and will adjust with job progress and weather conditions at CONSTRUCTION MANAGER'S direction. It is the CONTRACTOR'S sole responsibility to verify scheduling with jobsite Superintendent with sufficient lead time to ensure CONTRACTOR can coordinate all requirements of future activities regarding labor and materials.
  
- I. CONTRACTOR may accelerate an activity only when approved by the CONSTRUCTION MANAGER. Accelerated work performed without the approval of the CONSTRUCTION MANAGER will not be recognized as complete, processed for payment or protected by subsequent CONTRACTORS until all preceding schedule activities are completed and the accelerated work has been accepted.

- J. The Baseline Schedule may delineate major tasks and milestones for the project and does not necessarily include all activities required of the CONTRACTORS. If a Trade CONTRACTOR'S scheduled activity involves incidental work of other CONTRACTORS for items such as installation of an embedded item, rebar welding, or any other minor incidental work, it shall be assumed to all be completed within the activity duration scheduled. These unidentified activities shall be coordinated by the CONSTRUCTION MANAGER'S project Superintendent. The Superintendent shall have exclusive discretion in establishing start dates and durations and the MSJC – Menifee Campus Division 01Project Construction Schedule 01 32 00CONTRACTOR shall incorporate these requirements as if stated herein.
- K. Scheduled activities are established to indicate project completion prior to contract completion date. "Float" shall be defined and utilized as delineated in the General Conditions. Neither the DISTRICT, nor CONTRACTOR, has the right to the "float". Any "float" shall belong to the project, except for governmental delay float, which shall not be considered float owned by the project. This float shall only be distributed to the project upon completion of the project, and shall be used to offset Liquidated Damages, and shall not generate compensable delays. If CONTRACTOR'S construction progress is ahead of the agreed-upon baseline time schedule and a delay is encountered (even if such delay is a DISTRICT-caused delay), no compensation of any type will be due the CONTRACTOR and the DISTRICT may claim "float days" equal to delay until such "float days" are exhausted.
- L. Recovery Plan:
1. If CONTRACTOR is behind schedule by more than five (5) calendar days for any stage of Work, based on the updated Contract Schedule after incorporating all approved time extensions, CONTRACTOR shall submit to the District's Representative within five (5) days of notification of such delay, a "recovery plan". The recovery plan shall be based on proposed revisions to Baseline Schedule for the next fifteen (15) day period and shall show how CONTRACTOR intends to bring the Work back on schedule. Recovery plan shall also include a written description of how the measures that CONTRACTOR intends to take without additional cost to the District will regain schedule compliance. The recovery plan activities shall be identified according to their relationship to activities on the accepted schedule. If the revisions include sequence changes, the CONTRACTOR shall provide a schedule diagram comparing the original sequence to the revised sequence of Work.
  2. Should CONTRACTOR fail to submit and execute such recovery plan, the District shall have the option to direct CONTRACTOR to employ any or all measures that the District may deem fit to regain schedule compliance without additional cost to the District.
  3. The revisions shall not be incorporated into any schedule update until the revisions have been reviewed and accepted by District. Upon acceptance by the District's designated representative, the Recovery Plan shall be incorporated into the Contract Schedule during the next update.

**SECTION 01 32 00  
PROJECT CONSTRUCTION SCHEDULE**

4. CONTRACTOR will be required to submit a Recovery Plan for each update that indicates that the Work progress is more than five (5) calendar days behind schedule.
5. Should CONTRACTOR dispute the determination of the District's designated representative regarding the status on contract delay, such dispute shall not relieve him/her of the responsibility to comply with the requirements of this Section and other related Sections until the dispute is resolved per Contract terms.
6. Failure to provide recovery plan to the District may affect processing of pay application(s).

M. Inclement Weather:

1. The agreement between the DISTRICT and CONTRACTOR indicates the MSJC – Menifee Campus Division 01Project Construction Schedule 01 32 00 number of calendar days of Contract time for the Work. Within the stipulated Contract Time, the Bid Schedule, included in the bid documents, includes weather days in the project duration.
2. The number of weather related days have been built into the critical path. The project owns the allowable rain days. As the number of approved inclement weather days increases, the duration of this allowance or activity will decrease the corresponding number of days. No other activities may be concurrent with this activity.
3. Delays in the construction due to inclement weather will be construed as excusable delay only for the days in which the inclement weather substantially caused delay in overall progress of the Project by affecting Critical Work Activities.
4. CONTRACTOR shall submit a written claim on Company letterhead for each delay due to inclement weather within two (2) calendar days from the day of inclement weather. CONTRACTOR shall document the date and the nature of the inclement weather, the specific activity in which the inclement weather caused delay, and the task or operation in each trade that was delayed and its relation to the Critical Path.
5. The District's Representative will review the claim and the written documentation submitted by the CONTRACTOR and compare with the Contract Schedule.  
  
If the District's Representative finds that the inclement weather did substantially cause delay in the overall progress of the Project, the delay will be deemed an excusable delay.
6. Excusable delays shall be first deducted from the allowance of excusable delays shown on the Contract Schedule. When the total number of days for excusable delays due to inclement weather exceeds the allowance, the excess

will be granted through extension of the Contract Time by Change Order the affected bid Categories only in accordance with the provisions of the General Conditions. Extension to the Contract Time due to inclement weather will be granted only for excusable delay in excess of the allowance.

7. If the CONTRACTOR fails to submit a claim and documentation within the stipulated time, the inclement weather shall be construed to have caused no delay in the construction.

**N. WEEKEND / AFTERHOUR WORK OR MODIFIED HOURS**

1. It is each CONTRACTOR's responsibility to meet each completion date for each task on the schedule, which in turn, may or may not specifically identify required weekend, afterhour work, or modified working hours. These provisions shall also apply, but not limited to utility tie-ins, system related tie-ins, switchovers, site need considerations, CONTRACTOR delay, and etc. type of work.
2. When the school operation will or may be impacted, CONTRACTOR MUST performed their respective work on the weekend, afterhours or during modified working hours to complete scheduled activities at NO additional expense to the Owner.
3. Extended work shifts and/or working on Saturdays will be required for specific MSJC – Menifee Campus Division 01 Project Construction Schedule 01 32 00 trades to meet the construction schedule. Refer to the general conditions for additional information.

**1.4 SUBMITTALS**

- A. CONTRACTOR shall comply with Division 00 and 01 for the compliance and procedure of submittal submission
- B. All submittals regardless of when the respective scope of work is scheduled to be installed shall be completely submitted within the time frames as established in Division 00 and 01

**1.5 PROCUREMENT & FABRICATION SCHEDULE**

- A. CONTRACTORS shall provide dates as to when material must be ordered / fabricated and delivered to the project site. Materials shall be onsite as required as not to impact the schedule or dependent trades.
- B. CONTRACTOR shall provide written confirmation of ordered / fabricated material and delivery.

**1.6 CONTRACTOR Daily Work Report (DWR)**

- A. The Superintendent for each CONTRACTOR shall submit to the CONSTRUCTION

**SECTION 01 32 00  
PROJECT CONSTRUCTION SCHEDULE**

MANAGER'S Project Superintendent, a brief written report by 10:00am EACH AND EVERY WORKING DAY in which CONTRACTOR is performing work on the project site which identifies each of the following:

1. Schedule activity or activities currently under construction that day and the number of mechanics assigned to work the full or majority of the day on same.
2. Total number of mechanics on the project that day which will work the full day.
3. Estimated 100% completion date of each activity or activities currently under construction that day.
4. Specific problems, if any, with the actions and/or inactions of other CONTRACTORS, the DISTRICT, CONSTRUCTION MANAGER, ARCHITECT, consulting engineers, or the contract documents, which are preventing CONTRACTOR'S work from being properly completed per the schedule.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**

SECTION 01 33 00 - SUBMITTALS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Submittal Procedures
- B. Shop Drawings
- C. Product Data
- D. Samples
- E. Manufacturers' Instructions
- F. Manufacturers' Certificates
- G. Coordinated Drawings

1.2 SUBMITTAL PROCEDURES

- A. Transmit separate request for each submittal directly to the CONSTRUCTION MANAGER.
  - 1. Bind submittals sturdily, neatly label covers.
  - 2. Include ARCHITECT'S job number as it appears on Contract Documents.
  - 3. Include state agency application or approval number.
- B. Sequentially number the transmittal forms. Re-submittals are to have original number with an alphabetic suffix.
- C. Identify Project, CONTRACTOR, subcontractor or supplier; pertinent Drawing sheet and detail number(s) and specification section number, as appropriate.
  - 1. Provide name and telephone number of individual who may be contacted for further information.
- D. Apply CONTRACTOR'S dated stamp with CONTRACTOR'S original signature or initials affixed thereto, certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Stamped signatures or initials are not acceptable.
- E. Schedule submittals to expedite the Project. Coordinate submission of related items.
  - 1. Make all submittals in accordance with the progress schedule and far enough in advance of scheduled dates of installation to provide required time for

reviews for securing necessary approvals for possible revision and re-submittal and for placing orders and securing delivery.

- F. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- G. State effect of substitution on construction schedule and changes required in other work or products.
- H. Provide space for CONTRACTOR and ARCHITECT review stamps.
- I. Revise and re-submit submittals as required, identify all changes made since previous submittal. Re-submittals shall be prepared and re-submitted within ten (10) calendar days of CONTRACTOR'S receipt of returned submittals; within five (5) days if submittal affects schedule critical path.
- J. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- K. Determine and verify all field dimensions and conditions, materials, catalog numbers, and similar data.
- L. Coordinate as required with all trades and all public agencies involved.
- M. Unless otherwise specifically authorized by ARCHITECT, make all submittals in groups containing all associated items. ARCHITECT may reject partial submittals as not complying with the provisions of this section.

### 1.3 SHOP DRAWINGS

- A. Submit a schedule of the shop drawings, listing their required submission and review dates to the ARCHITECT for review and acceptance. The schedule shall allow sufficient time for checking by the ARCHITECT. In addition, the shop drawing submission and review dates shall be incorporated into the progress schedule required in the General Conditions.
- B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project will not be approved as Shop Drawings.
- C. Electronically submit documents in PDF format. An electronically marked up file will be returned. Create PDFs at native size and right side up. Illegible files will be rejected. Submit in the following quantities:
  - 1. Shop Drawings: One (1) electronic copy of black line drawings. Two (2) hard copies of approved full-sized black line drawings.
  - 2. Product Data/Equipment Data: One (1) electronic copy of indexed

- documents with table of contents and page numbers. Two (2) hardcopies of approved product data.
3. Samples: Five (5) - labeled - plus additional quantity to be returned to CONTRACTOR (each type and color being used in project).
  4. DSA Deferred Approvals: Three (3) original wet-stamped copies of drawings and calculations, or more as required by DSA, plus four (4) photocopies and one (1) electronic copy of all above.
- D. Shop Drawings shall include fabrications and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
1. Dimensions.
  2. Identification of products and materials included.
  3. Compliance with specified standards.
  4. Notation of coordination requirements.
  5. Notation of dimensions established by field measurement.
- E. Safety Data Sheets (SDS): Submit safety data sheets and chemical inventory list for materials brought to site with product submittals.
- F. Sheet Size: Native size as appropriate for information conveyed. Where feasible, submit Shop Drawings on sheets at least 8½ inch x 11 inch, but not larger than 30 inch x 42 inch.
- G. The CONTRACTOR shall review, stamp with his approval as herein required, and submit with reasonable promptness and in orderly sequence, in accordance with the submittal schedule, all shop drawings required by the Contract Documents or subsequently by the ARCHITECT as covered by modifications. Shop drawings shall be properly identified. At the time of submission the CONTRACTOR shall inform the ARCHITECT in writing of any deviation in the shop drawings from the requirements of the Contract Documents.
- H. Stamp: Each page of shop drawings shall bear the CONTRACTOR'S stamp, which shall signify the CONTRACTOR'S representation that he has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained in the shop drawings. Each stamp shall be accompanied by a wet signature or initial of an employee of the CONTRACTOR who may be contacted for information. Stamped signatures or initials are not acceptable.
- I. The ARCHITECT will review shop drawings with reasonable promptness so as not to cause any delay, but only for conformance with the design concept of the project and with the information given in the Contract Documents. The

ARCHITECT'S favorable review of a separate item shall not indicate acceptance of an assembly in which the item functions.

- J. Submittal of shop drawings to the ARCHITECT or CONSTRUCTION MANAGER shall be made by the CONTRACTOR with a dated transmittal form or letter and not by subcontractors or suppliers.
- K. The ARCHITECT'S review of shop drawings shall not relieve the CONTRACTOR of responsibility for any deviation from the requirements of the Contract Documents unless the CONTRACTOR has informed the ARCHITECT in writing of such deviation at the time of submission and the ARCHITECT has given written acceptance to the specific deviation, nor shall the ARCHITECT'S favorable review relieve the CONTRACTOR from responsibility for errors or omissions in the shop drawings.
- L. No portion of work requiring shop drawings shall be commenced until the shop drawings have been returned with a favorable review by the ARCHITECT.

#### 1.4 PRODUCT DATA

- A. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- B. After review, distribute and provide copies for Record Documents.

#### 1.5 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for ARCHITECT selection or in custom colors selected.
- C. Include identification on each sample with full Project information.
- D. Submit a minimum of five (5) samples, or as specified in individual sections of the specifications, four (4) of which will be retained by the ARCHITECT.
- E. Reviewed samples which may be used in the Work are indicated in individual specification sections.
- F. Selection or rejection of samples will be made by the ARCHITECT in writing.

#### 1.6 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing in quantities specified for Product Data.

- B. Identify conflicts between manufacturers' instructions and Contract Documents.

#### 1.7 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit manufacturers' certificate to ARCHITECT for review in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to ARCHITECT.

#### 1.8 COORDINATED DRAWINGS

- A. Submit drawings, which indicate routing, locations, sizes, types, and numbers of components in concealed spaces where potential conflict may occur between structures, mechanical, electrical, fire sprinklers, communications, and ceiling suspension systems.
- B. Indicate locations of all ceiling penetrations and surface-mounted items. Provide cross sections at all areas to indicate proper support of ceilings and non-interference with work of other sections of the specifications. Cross sections shall indicate coordination required and proposed solutions for routing of elements where potential conflict exists. Reproduction of ARCHITECT'S reflected ceiling plan is not acceptable.
- C. Drawings shall be based on field measurements, shop drawings and product data.
- D. Conflicts shall be brought to ARCHITECT'S attention immediately.
- E. Submit to the CONSTRUCTION MANAGER, in writing, requests for clarification or interpretations that will affect the intent of the Contract Documents.
- F. The coordinated drawings shall indicate each class of work in the affected area. The drawing or written submittal shall include CONTRACTOR'S recommendations for the solution of any potential conflicts as well as recommendations tendered by any work of any section of the specifications which may be affected thereby.
- G. Submit the coordinated drawings in a scale of not less than 1/8" = 1'-0" with necessary sections and profiles at an appropriate, clearly readable enlarged scale. Submit the coordinated drawings as one (1) reproducible and two (2) blue-line prints.
- H. The ARCHITECT will review the submittals, make appropriate notations and comments to ensure the solution meets the intent of the Contract Documents and then return to CONTRACTOR for implementation.
- I. The CONTRACTOR shall be responsible for the proper coordination of the work of all sections of the specifications in the execution of coordinated drawing. Any installation of materials, components or equipment under one section of the

specifications without full and complete, agreement, knowledge, and consent by fabricators of adjacent or otherwise related or affected work will not be approved.

- J. It shall be incumbent upon the CONTRACTOR that all fabricators of work involved in the execution of coordinated drawings be informed, consulted and advised in sufficient advance time to arrive at solutions where no extension of contract time or extra cost to the OWNER will be approved due to CONTRACTOR'S negligence in the expeditious, timely submittal of coordinated drawings.
- K. Refer to Scope Summaries for other electronic file requirements.

**1.9 DSA DEFERRED APPROVALS AND MUNICIPALITY APPROVALS**

- A. Prepare all necessary shop drawings and product data. Submit five (5) hard copies. Four (4) copies will be retained by the CONSTRUCTION MANAGER/ARCHITECT.
- B. Submit eight (8) bond copies of product data on 8½" x 11". Seven (7) copies will be retained by the CONSTRUCTION MANAGER/ARCHITECT. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- C. Where required by local municipalities submit to and obtain necessary approvals directly to municipality with copy submitted to CONSTRUCTION MANAGER.
- D. Upon DSA and/or municipality approval and review and final corrections, provide three (3) hard copies and one (1) electronic copy for Record Documents/use by the CONSTRUCTION MANAGER.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

END OF SECTION

## SECTION 01 35 00 SAFETY PROGRAM

### PART 1 – INTRODUCTION AND BASIC ELEMENTS

#### 1.1 RELATED DOCUMENTS AND PROVISIONS

- A. All Contract Documents should be reviewed for applicable provisions related to the provisions in this section, including without limitations:
  - 1. Drawings and Specifications.
  - 2. General Conditions, Special Conditions and Supplementary Conditions.
  - 3. Summary of Work.
  - 4. Other General Requirements.
  - 5. Local, State and Governing Agencies.
  - 6. Applicable Cal/OSHA Standards (Title 8).
  - 7. Referenced consensus standards, including ANSI, NFPA, (where applicable).
- B. The requirements set forth in this Section are complementary to, and do not supersede, the requirements of the General Conditions.
- C. These guidelines are not intended to be complete in every detail, but are merely of a general nature. The separate CONTRACTORS are in no way relieved of their responsibilities for safety of persons and property and compliance with all statutes, rules, regulations and orders applicable to the conduct of the work

#### 1.2 Definitions

- A. Competent Person – One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous and is knowledgeable of applicable regulations and who has authorization to take prompt corrective measures to eliminate risks or prevent personnel exposure to hazardous conditions.
- B. Globally Harmonized System Program (GHS) – Federal required program which includes providing and maintaining project related Safety Data Sheets (SDS), providing chemicals to be used and inventory protocol, and providing a list of hazardous substances and their use.
- C. Hazardous Communication Program (HCP) – CAL OSHA required program which includes providing and maintaining project related Safety Data Sheets (SDS), providing chemicals to be used and inventory protocol, and providing a list of hazardous substances and their use.
- D. Incident – An unexpected happening causing a “near miss”, loss, or injury, including without limitation, accidental or unanticipated events involving personal injury, illness or property damage.
- E. Job Hazard Analysis (JHA) – A task-driven planning document used to help ensure every task receives proper safety assessment and planning.
- F. Personnel – Any person employed by Prime Contractor and/or business, firm, person, including but not limited to deliveries, suppliers, and vendors that has an agreement with Prime Contractor, in which Prime Contractor has a contract agreement with Owner that is providing services to the project site.
- G. Qualified Person – A designated person who by possession of a recognized degree, certificate, or professional standing, or who, by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve and resolve problems with the ability to safely perform all assigned duties and, when required, is properly licensed in accordance with federal, state, or local laws and regulations.
- H. Site Specific Safety Plan (SSSP) – A written plan communicating how the work will be done safely taking into

- I. Prime Contractor – includes those having a direct or indirect contract with the Owner and ones who furnished labor, material or services for a special design according to Plans, Drawings, and Specifications of this Work.
- J. Subcontractor - includes those having direct or indirect contracts with Prime Contractor and ones who furnished labor, material or services for a special design according to Plans, Drawings, and Specifications of this Work.
- K. Supervisor - One who is trained and certified to identify existing and predictable hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them.

### 1.3 General Safety Understanding

- A. Safety requirements are the responsibility of the Prime Contractor and their subcontractors.
- B. Any sub-tier to a Prime Contractor is responsible to comply with the safety requirements.
- C. Prime Contractor is responsible to ensure their sub-tier complies with these responsibilities.
- D. Prime Contractor retains sole responsibility for regulatory compliance and the means and methods employed to implement the contents of their Program.
- E. The requirements set forth in this Section are complementary to, and do not supersede, the requirements of the General Conditions, General Requirements, Governing Agencies or other provisions of the Contract Documents pertaining to safety. In the event of a conflict between or among provisions relating to safety or protection, the provision that requires **the greater degree and higher level of action, care, caution or protection shall govern.**
- F. Prime Contractor shall comply fully with all Federal, State and/or local safety related laws, orders, citations, rules, regulations, standards and statutes.
- G. Prime Contractor shall comply with safety, health, and environmental laws and regulations of safe work practices. This information is offered as assistance to the CONTRACTOR in complying with all project safety requirements. However, the information contained within this Specification is not intended to reflect all requirements for safe practices and conduct for which a CONTRACTOR may be responsible for.
- H. Prime Contractor shall comply with Site Specific Safety Plan (SSSP) requirements. These requirements are to be followed in addition to the Prime Contractor's Injury and Illness Prevention Program (IIPP).
- I. Any information or submittals provided to Construction Manager shall be reviewed solely to verify the content of the Prime Contractor's submittal(s) and for record.

### 1.4 General Requirements

- A. The Prime Contractor has sole responsibility, on a twenty-four (24) hour day, seven (7) day week basis, for initiating, maintaining, supervising and enforcing all safety precautions and programs in connection with the performance of the Contract for the safety of their personnel, their subcontractors, the public, and the project site. This includes responsibilities for vendors, delivery and transportation services, and service providers at the project site. No actions, inspection or approvals by the Owner, Owner's Program Manager, Construction Manager, or other person acting on behalf of the Owner shall diminish such Prime Contractor responsibility.
- B. Prime Contractor shall make Construction Manager immediately aware of:
  - 1. Any unique safety, health, or environmental concerns related to their work and make timely efforts to notify other affected prime contractors working on project site and protect the public from hazards.

- C. If Prime Contractor or their subcontractor employs non-English speaking personnel, the Prime Contractor and/or subcontractor shall have a supervisor (superintendent or foreman) proficient in English and the foreign language(s).
- D. Prime Contractor shall be responsible to secure and comply with all permits, such as, but not limited to: excavations, tower cranes, temporary elevators, asbestos abatement, lead abatement, air permits, water permits, and hazardous waste generation. All permits are to be forwarded to the Construction Manager.
- E. Prime Contractor is responsible for maintaining all postings required by applicable laws and the contract documents, such as, but not limited to, the Cal/OSHA poster, Cal/OSHA 300 & 301 logs, first aid register, accident reports, equipment inspection records, and health and safety training records for personnel.
- F. Prime Contractor shall provide first aid kit/supplies in accordance with Cal/OSHA for their personnel and comply with governing regulations.
- G. Prime Contractor shall provide fire extinguishers of the appropriate size and type to be used and in accordance with NFPA recommendations for the type of exposure and the Site Specific Safety Plan.
- H. Prime Contractor shall ensure that no alcohol, firearms, weapons, animals, or controlled substances enter or are at the project site. Prime Contractor shall immediately and permanently remove from the project site any personnel found in violation of this provision.
- I. No radios, headphones, earbuds, ipods, MP3 players, music devices of any type or speakers are permitted on the project site.
- J. No glass bottles are permitted.
- K. Loose or frayed clothing, dangling ties, finger rings, etc. shall not be worn around moving machinery or other sources of entanglement.
- L. Machinery shall not be repaired or adjusted while in operation, nor shall oiling of moving parts be attempted, except on equipment that is designed or fitted with safeguards to protect the person performing the work.
- M. Do not work under vehicles or equipment or machinery supported by jacks or chain hoists without protective blocking that will prevent injury if jacks or hoists should fail.
- N. Do not operate any motorized equipment, tractors, skip-loaders, forklifts, heavy equipment, and carryalls on surfaces, terrain, and slopes not permitted by the manufacture.
- O. Pickup and/or delivery of supplies or equipment shall be limited to normal working hours (7:00 a.m. - 3:30 p.m.) unless previously arranged with Construction Manager.
- P. Construction Manager shall designate a construction entry to the project site.
- Q. Construction Manager shall designate a staging area so as not to interfere with the normal function of the Owner's operation.
  - 1. If Prime Contractor requests additional staging and space permits, location and ingress/egress shall be coordinated in advance with Construction Manager. Additional fencing is at Prime Contractor's expense.
- R. Parking areas shall be reviewed and coordinated with Construction Manager in advance. No parking or

- S. When working in or around occupied areas; tenants, users, and the public have the right-of-way.
  - 1. All project sites have been declared “drug-free zones”. No drugs, alcohol and/or smoking are allowed at any time in any buildings and/or grounds or adjacent owner property.
  - 2. Smoking, E-cigarettes and the use of any tobacco products is prohibited on the project site or adjacent property.
  - 3. Foul language, unacceptable and/or loud language is prohibited. “Cat calls” or other derogatory language is prohibited.
  - 4. No clothing exhibiting profanity is permitted.
  - 5. No interaction with tenants, users and the public is permitted.
  - 6. Prime Contractor shall observe the noise ordinance and mitigate at all times including, without limitation, all applicable local, city, and/or state laws, ordinances, and/or regulations.
  - 7. If portable lights are used after dark, all light must not be directed into neighboring property.
  - 8. All paths of travel for deliveries, including without limitation, material, equipment, and supply deliveries, shall be reviewed and coordinated with Construction Manager in advance. Any damage will be repaired to the pre-damaged condition by the Prime Contractor.
  - 9. When on an active campus:
    - a. No interaction with students, staff or faculty is permitted.
    - b. Driving on the premises shall be limited to periods when students and public are not present. If driving or deliveries must be made during the school hours, two (2) or more ground guides shall lead the vehicle across the area of travel. In no case shall driving take place across playgrounds or other pedestrian paths during recess, lunch, and/or class period changes. The speed limit on-the premises shall be five (5) miles per hour (maximum) or less if conditions require.
- T. Failure to follow these directives could result in individual(s) being suspended or removed from the project site at the discretion of Construction Manager. The same rules and regulations shall apply equally to delivery personnel, inspectors, consultants, and other visitors to the project site.
- U. News Media
  - 1. Project site incidents resulting in news media coverage shall be immediately reported to the Construction Manager.
  - 2. Any questions from news media personnel (radio, television, and newspaper) must be referred to the Construction Manager.

## **PART 2 – PRIME CONTRACTOR AND SUBCONTRACTOR RESPONSIBILITIES**

### **2.1 General Responsibilities**

- A. Shall have all applicable Cal/OSHA regulations available for use and reference at the project site.
- B. Responsible to design and implement Site Specific Safety Plan (SSSP) and submit to Construction Manager for review.
- C. Shall ensure their personnel are properly trained and instructed for all work that require specific training and/or competency to meet all applicable Cal/OSHA regulations, state and federal law, and the requirements herein.
- D. Responsible for disposal on a daily basis, all rubbish and debris generated by its work.
- E. Responsible for ensuring that prompt corrective action is taken when they are made aware of any safety issues and/or concerns.
- F. Forward to Construction Manager a copy of any citation or warning for record.
- G. “Competent Person”, “Qualified Person” or “Supervisor” shall be readily available at the project site during activities requiring same.

herein. If not applicable at the time of the meeting, Prime Contractor shall submit a copy no later than 7 calendar days before the activity commences:

1. Code of Safe Practices.
2. Project specific Injury and Illness Prevention Plan (**IIPP**).
3. Heat Illness Prevention Plan (**HIPP**).
4. Hazard Communication/Globally Harmonized System (**GHS**) Program which includes:
  - a. Safety Data Sheets (**SDS**).
  - b. Chemical inventory list.
  - c. Hazardous substance list.
  - d. Refer to section 3.23 for additional information.
5. First Aid/CPR trained personnel on the project site and their expiration dates.
6. Operator’s certification and documented training:
  - a. Required certification.
    - I. Forklift (expires 3 yrs).
    - II. Crane (expires 3 yrs).
  - b. Documented training on safe operations.
    - I. Boom-lift.
    - II. Scissor lift.
    - III. All other equipment.
7. List of Prime Contractor’s: “Competent Person(s)”, “Qualified Person(s)”, “Licensed”, or “Supervisor(s)” as defined by OSHA for the activities noted below. Refer to Exhibit “C.1” for the Competent Person Designation form. Prime Contractor to fill this out and submit to the Construction Manager.
  - a. Asbestos Abatement (Refer to section 3.2) .....Competent
  - b. Burning, Welding and Hot Work (Refer to section 3.4) .....Competent
  - c. Confined Space (Refer to section 3.8).....Competent
  - d. Crane Picks & Critical Lifts (Refer to section 3.10 & 3.11)..... Qualified
  - e. Demolition (Refer to section 3.12) ..... Qualified
  - f. Electrician (live circuits) (Refer to section 3.13)..... Qualified
  - g. Explosives (Refer to section 3.17) ..... Licensed
  - h. Fall Protection (Refer to section 3.18)..... Competent and Qualified
  - i. Ladders (Refer to section 3.30)..... Qualified
  - j. Lead Abatement (Refer to section 3.31)..... Supervisor
  - k. Pile Driving (Refer to section 3.36) ..... Competent
  - l. Powder Actuated Tools (Refer to section 3.37) ..... Qualified
  - m. Scaffold (Refer to section 3.40)..... Competent
  - n. Silica and Dust Exposure Protection (Refer to section 3.41) ..... Competent
  - o. Steel Erection (Refer to section 3.42)..... Competent
  - p. Trench and Excavation (Refer to section 3.45)..... Competent
8. Site Specific Safety Plan (**SSSP**) (Refer to section 2.1.B)
  - a. Communicates how the work will be done safely taking into consideration personnel, inspectors, visitors, and the general public (e.g. students, faculty, and pedestrians). This plan shall include, but not necessarily be limited to:
    - i. Confined Space .....(Refer to section 3.8)
    - ii. Crane Picks and Critical Lifts.....(Refer to section 3.10 & 3.11)
    - iii. Demolition ..... Refer to section 3.12)
    - iv. Explosives..... (Refer to section 3.17)
    - v. Fall Protection ..... (Refer to section 3.18)
    - vi. Job Hazard Analysis (JHA) .....(Refer to section 2.4)
    - vii. Lead Abatement..... (Refer to section 3.31)
    - viii. Lockout/Tagout (LOTO)..... (Refer to section 3.33)
    - ix. Precast, Pre-fabricated Concrete, Tilt-up Panels ..... (Refer to section 3.38)
    - x. Respirator Protection..... (Refer to section 3.39)

- xiii. Traffic Control, Flagging, Operations and Plate Bridging ..... (Refer to section 3.44)
- xiv. Trench and Excavations (20' or greater) ..... (Refer to section 3.45)

**2.3 Project Safety Orientation and Training**

- A. Personnel must attend a project site safety orientation conducted by the Construction Manager before personnel starts.
  - 1. During the orientation, Prime Contractor shall provide a copy of the appropriate required equipment certification and/or documented training as noted in 2.2.A.6.
- B. Prime Contractor is responsible to advise the Construction Manager of new personnel on the project site and coordinate project site safety orientation prior to the starting work.

**2.4 Job Hazard Analysis (JHA)**

- A. Developed by the Prime Contractor and/or its Subcontractor for critical activities identified by Prime Contractor, Subcontractor, Construction Manager, and/or Owner. This would include, but not limited to:

Personal fall arrest systems	Crane picks (74% or less of crane capacity)	Lead abatement
Live electrical work	Crane picks (75% or greater of crane capacity)	Use of explosives
Trench/Excavations (5ft or deeper)	Tilt-up	Work on or adjacent to road ways
Confined space	Asbestos abatement	Helicopter picks

- B. The JHA's are to be completed by the Prime Contractor's supervisor familiar with the work activity to be performed.
  - 1. The JHA will break down the work activity into key steps, identify the hazards associated with each step, and the controls to either eliminate, avoid and/or protect against potential accident.
  - 2. Prior to commencing the work activity, the Prime Contractor's supervisor will review the completed JHA with personnel performing the work activity.
  - 3. Refer to Exhibit "C.2" for the form.
- C. The JHA's will be kept by the Prime Contractor for future reference and a copy of the JHA will be submitted to Construction Manager.

**2.5 Pre-shift Meeting**

- A. A pre-shift production and safety meeting shall be conducted at the start of each shift.
  - 1. Refer to Exhibit "C.3" for the form.
- B. These meetings shall:
  - 1. Review production activities for the shift.
  - 2. Review safety activities that are a component of the production activities.
- C. The meeting at a minimum to focus on the following:
  - 1. Tasks for the shift.
    - a. Applicable Job Hazard Analysis' (JHA's).
  - 2. Tools and equipment needed for those tasks.
  - 3. Materials needed for those tasks.
  - 4. Proper material handling techniques.
  - 5. Safe work procedures to perform those tasks.
  - 6. PPE needed to safely perform those tasks.
  - 7. Other pertinent information.
  - 8. Questions from personnel.

**2.6 Injury and Incident Reporting**

- A. In the event of an Injury or incident, notify Construction Manager's Project Superintendent immediately.

shall include the following:

- a. Copies of all reports of any injury or incident involving other people (e.g. general public) or property damage caused by their actions.
  - b. Signed statements from witnesses of their observations. Witness statements shall contain the name and permanent address of the witness.
  - c. Recommendations to prevent recurrence of the injury or incident.
  - d. How the report will be communicated to all personnel (e.g. tailgate meeting).
    - i. Submit to Construction Manager, sign-in sheet, the same day they are conducted.
- B. Notify Construction Manager's Project Superintendent the same day of any "near-miss" incidents.

## 2.7 Safety Meetings

- A. Weekly safety meetings are to be conducted in compliance with Cal/OSHA standards, which address the specific hazards associated with their trade. Provide a copy of attendees with their signature along with the meeting minutes to Construction Manager weekly.
- B. A Superintendent and/or Foreman shall be present at all Construction Manager scheduled safety/coordination meetings.
- C. All prime contractors will attend any meeting, such as an "all hands safety meeting", scheduled by Construction Manager related to safety.

## 2.8 Safety Inspections

- A. Prime Contractor shall designate a project site safety representative (e.g. Superintendent, Foreman), who shall conduct and document a **safety inspection** of their work areas and submit a copy to Construction Manager the same day the inspection was performed. Safety inspections are to be conducted daily and more frequently if necessary. Any conditions that may affect the safety of persons or property will be noted in writing for correction by the creating prime contractor.

## 2.9 Disciplinary Policy and Enforcement

- A. A plan for disciplinary action for violations of known safety requirements shall be part of the Prime Contractor's IIPP.
- B. This program is the minimum safety standards established for this project site and is not intended to take the place of a Prime Contractor's Disciplinary Policy.
- C. Construction Manager reserves the right to stop Prime Contractor's work if Construction Manager believes Prime Contractor is not performing their work in compliance with any applicable safety laws or regulations or agreed upon safety action plan/program (e.g. JHA, Crane pick plan). The work activity will cease until corrective action is taken by the Prime Contractor. If Prime Contractor fails to take corrective action, Construction Manager, in its discretion, shall have the right, but not the obligation, to take corrective action and to charge the cost and/or expense thereof against Prime Contractor.
- D. The Prime Contractor agrees to enforce compliance with the following disciplinary actions as a result of committing a safety violation:
  1. Action Level One (1) – If Construction Manager observes that Prime Contractor has failed to comply with any safety requirements applicable to the work, Construction Manager will have the right, but not the obligation, to issue a written Safety Notice to the Prime Contractor.
  2. Action Level Two (2) – If an observed non-compliance with safety requirements is not corrected by Action Level One, or if the Prime Contractor repeatedly fails to comply with the safety requirements applicable to the project site, Construction Manager shall have the right, but not the obligation, to issue a second written Safety Notice to the Prime Contractor and its surety.
    - a. The Prime Contractor may not resume work until Construction Manager and the Prime

- adequate corrective actions.
- b. Construction Manager may, in the exercise of its sole discretion, require of Prime Contractor to include in their corrective actions, but are not limited to, the following:
    - i. Removal of certain Prime Contractor or subcontractor personnel from the project site.
    - ii. Alteration of the Prime Contractor's or subcontractor's job procedures.
    - iii. The Prime Contractor shall not resume work until proposed corrective actions are reviewed by Construction Manager and has agreed to the work proceeding. Construction Manager will document the meeting results in the form of meeting minutes, a copy of which will be provided to the Prime Contractor and maintained at the project site.
  3. Action Level Three (3) – If Action Levels One and/or Two do not result in the Prime Contractor's performance being brought into compliance with applicable safety requirements, then other actions, including, without limitation, contract termination may result.
  4. Nothing stated under 2.9 (above) shall be interpreted as creating or implying any obligation on the part of the Owner or Construction Manager to issue any notices, whether formal or informal, to Prime Contractor in the event of an incident or of circumstances involving the risk of an incident. Notices issued to Prime Contractor, whether or not in the forms suggested above, shall be complied with by Prime Contractor. Nothing stated herein shall be interpreted as limiting any right's or remedies to the exercise of procedures set forth in this section.
  5. **IMMINENT DANGER** (any conditions or practices in any place of employment which are such that a danger exists which could reasonably be expected to cause death or serious physical harm) – Any imminent danger type safety violations shall result in **immediate suspension** and/or permanent removal. Any personal removed is not permitted on any Construction Manager's projects.

### **PART 3 – SAFETY STANDARDS**

#### **3.1 Air Monitoring Equipment (see Confined Space Entry for additional requirements)**

- A. Appropriate multi gas air monitoring equipment shall be used to test confined spaces, utility holes, cable vaults, pits, and similar spaces for flammable, toxic, or oxygen deficient atmospheres. The exposing prime contractor(s) is (are) responsible for the provision, maintenance, calibration and testing of equipment.
- B. Air monitoring equipment must be tested and calibrated as required by the manufacturer before each use.
- C. Prior to use, personnel must be trained per manufacturer requirements on the use, limitations and alarm modes of each air-testing device that is (are) used.
- D. Personnel must immediately leave work area whenever an equipment alarm sounds due to:
  1. Low or high oxygen level (acceptable range is 19.5% - 23% oxygen).
  2. Combustible gas above 10% lower explosive limit (LEL).
  3. Hydrogen Sulfide reaches permissible exposure limit of 10 ppm, or other toxic gas level reading.

4. Sensor failure.
5. Low battery alarm.

### 3.2 Asbestos

- A. Abatement Prime Contractor must be licensed in accordance with applicable State, Federal, and Local requirements to perform removal and disposal of asbestos containing material and encapsulation.
- B. The Prime Contractor shall ensure personnel are trained in asbestos awareness to identify ACM and PACM.
- C. Upon discovery of any asbestos containing materials (ACM) or presumed asbestos containing materials (PACM), Prime Contractor shall stop work in such areas and notify Construction Manager.
- D. All asbestos abatement and removal work must follow all regulations of Cal/OSHA, the Environmental Protection Agency (EPA), and the applicable Air Quality Management District (AQMD).
- E. Abatement Prime Contractor's Competent Person shall:
  1. Conduct an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace.
  2. Shall make frequent and regular inspections:
    - a. Class I jobs, project site inspections shall be made at least once during each work shift, and at any time when requested by personnel.
    - b. Class II, III and IV jobs, project site inspections shall be made at intervals sufficient to assess whether conditions have changed and at any time when requested by personnel.
  3. For Class I or II asbestos work, perform or supervise the following duties, as applicable:
    - a. Set-up regulated area, enclosures, or other containments; ensure integrity of containments, control entry/exit from enclosure or area.
    - b. Supervise personnel exposure monitoring.
    - c. Personnel must wear respirators and protective clothing.
    - d. Ensure personnel set up, use and remove engineering controls, including personal protective equipment, hygiene facilities, decontamination procedures, proper work practices, and notification requirements.

### 3.3 Barricades and Signage

- A. Temporary perimeter fencing may be provided by the Construction Manager. Prime Contractor to refer to logistics plan, subcontract agreement or any other contract document that may communicate the limits of perimeter fencing being provided by the Construction Manager. Prime Contractor to provide the following as a minimum:
  1. Barricades are required around excavations, holes or openings in floor or roof areas, edges of roofs and elevated platforms, overhead work and overhead utilities, and wherever necessary to warn or protect against falling in, through or off. Barricades must be suitable for the area of use.
  2. To ensure the safety of the general public, Prime Contractor shall provide and maintain adequate protection, such as chain-link fences, gates and barricades, to separate work areas from areas outside project site limits. Barricades must be suitable for the area of use.
  3. Barricades may also be used to isolate people from work activities as required by the activity, potential hazards created by the activity, or the location of the activity. Barricades must be suitable for the area of use.
- B. Chain-link Fencing:
  1. Shall be free from barbs, excessive galvanizing material that may form sharp projections (icicles), or other projections that may cause injury.
  2. Must be in good repair and installed to ensure stability of the fencing from being knocked over.
  3. Must be installed/braced to prevent being blown over during windy conditions.

4. Base supports shall be installed/placed to eliminate tripping hazards when fencing is placed adjacent to sidewalks and walkways.
- C. Prime Contractor shall notify Construction Manager and obtain approval to remove any barricade (e.g. guardrails), and other perimeter protection (e.g. fencing) and/or floor opening covers.
- D. Prime Contractor shall notify those affected by the removal of any barricade, perimeter protection and/or floor opening cover, and will be solely responsible, including providing additional temporary safety measures for area and those in the area during the period of temporary removal.
- E. Prime Contractor shall immediately return to proper condition and maintenance, any barricade, perimeter protection and/or floor opening cover removed because of their work.
- F. Prime Contractor shall provide appropriate signs (e.g. Powder Actuated Tool in Use).

### **3.4 Burning, Welding and Hot Work**

- A. Hot work includes, but is not limited to, the following activities: grinding, cutting, welding, burning, brazing or soldering, heating, hot air welding or other operations that generate heat, flames, arcs, sparks or other source of ignition.
- B. Prime Contractor shall have a written Hot Work Program for fire prevention during hot work activities.
- C. Prime Contractor shall procure and post all permits necessary for hot work as required by the Fire Marshal or Fire Code having jurisdiction over the project site. The Prime Contractor shall attain a copy of all permits before starting any work.
- D. Prior to performing hot work, evaluate the following: type of hot work to be performed, project site preparation, atmospheric conditions, use of appropriate personal protective equipment, and firefighting equipment.
- E. Project site preparation should include a survey for the following: combustible materials; hazards posed by heat transfer; flammable, corrosive, or toxic residues; equipment linings, appropriate lockout/tagout applications, and housekeeping.
- F. Prime Contractor's Competent Person shall:
  1. Notify Construction Manager of hot work activity.
  2. Inspect the work area(s) for safety factors and assure fire extinguishers or other firefighting equipment are present.
  3. Attach the hot work permit to the fire extinguisher or other fire fighting equipment that will be present during the activity.
- G. Fire extinguishers rated at least 10B:C, and/or other fire protection equipment are to be provided by the Prime Contractor for each hot work operation in accordance to Cal/OSHA and local Fire Marshal / Fire Code requirements.
  1. This equipment shall be located on the same elevation(s) of the work and within 25 feet of the hot work activity.

### **3.5 Clothing and Personal Protective Equipment (PPE)**

- A. Without limitations to any other requirements of applicable laws or the contract documents, Prime Contractor and subcontractor are responsible for providing all Personal Protective Equipment (PPE) for their personnel (e.g. hard hats, safety glasses, face shield, harness, lanyard, N-95 particulate mask, respirator, high visibility vest, and hearing protection).
- B. PPE must be properly fitted and suitable for protection from existing hazards.

- C. Provide adequate training for the use of PPE that personnel will wear and/or use as required by applicable Cal/OSHA standards.
- D. The minimum PPE requirements of the project:
  - 1. **Hard hats** (ANSI Z89.1 or equivalent) shall be worn at all times (100%) while on the construction project site, except in the break areas and construction offices.
    - a. Welders must wear a hard hat when using welding hoods.
    - b. No metal hard hats, “cowboy” style hard hats, or bump caps allowed.
  - 2. **Safety glasses** (ANSI Z87.1 or equivalent) that meet Cal/OSHA standards for the exposure shall be worn at all times (100%) while on the construction project site, except in the designated break areas and construction offices. This includes those with prescription eye wear.
  - 3. **High visibility vests** (Class 2 vest) required; safety orange, green or yellow, shall be worn at all times (100%) and must be the outermost garment while on the construction project site, except in the break areas and construction offices.
    - a. ANSI 107-2010 **Class 3 vests** are required for personnel with high task loads in a wide range of weather conditions and where traffic exceeds 50 mph. These work activities could include but not limited to all personnel, vehicle operators, utility personnel, survey crews, emergency responders, and railway.
  - 4. **Construction work boots** (ANSI Z41.1 or equivalent) shall be worn at all times during the course of all construction activities. They must be substantial leather boots with good rubber soles.
    - a. Additional foot protection (e.g. metatarsal guards, steel toe) may be required if there is a danger of foot injury due to falling objects, rolling objects, or chemical exposure (e.g. chemical resistant type rubber boot). Metatarsal guards are required when operating a wacker, jack hammer, and jumping jack tamper.
    - b. Loafers, sandals, tennis shoes, running shoes, or open-toed shoes are not proper work shoes and are not permitted.
  - 5. **Long Pants** are required at all times. No sweat pants.
  - 6. **Shirts** must have a minimum four (4) inch sleeve length over shoulders and shall be worn at all times.
    - a. Tank tops, cut-offs, net shirts, sleeveless shirts are prohibited.
    - b. No questionable, profanity and/or vulgar images, words or logos are allowed on shirts or other visible clothing apparel.
  - 7. **Hand Protection** may be required if there is a danger to hand injury due to cuts, burns, electrical current, or harmful physical or chemical agents. Protective gloves are required when working with wet concrete.
  - 8. **Hearing Protection** devices shall be used to protect from noise levels which exceed 90dBA.
  - 9. **Face Protection** may be required when:
    - a. There is an inherent risk from flying particles or injurious chemicals.
    - b. Cutting, grinding or sanding of finished concrete or metals.
  - 10. **Respiratory Protection** may be required if engineering or operational controls are not feasible for limiting harmful exposure to airborne contaminants.

### 3.6 Compressed Gas Cylinders, Gas Cutting and Welding

- A. All cylinders must be secured and transported in an upright position at all times.
- B. Oxygen and fuel gas cylinders must be separated at least 20 feet, or enclosed with a 5 foot high barrier with a ½ hour fire rating when in storage and placed away from potential contact that may rupture the tanks.
- C. Cylinder valves shall be turned to the off position if left inactive for 30 minutes or longer.
- D. Cylinders designed for valve protection caps must have the valve protection cap installed when in storage or when being transported.

- E. Cylinders, hoses, and fittings shall be checked for leaks and damage on a regular basis.
- F. Cylinders must be labeled as to the nature of their contents per NFPA requirements and the OSHA Hazard Communication Standards.
- G. Cylinders shall not be taken into confined spaces.
- H. Cylinder storage areas shall have appropriate warning signage posted.
- I. Appropriate fire-fighting equipment must be provided for each cylinder storage area.
- J. Torches and hoses shall not be left connected to cylinders overnight.
- K. Torches and hoses shall not be stored in unventilated gang boxes or storage containers.
- L. Flashback arrestors and check valves shall be installed in accordance with manufacturer's instruction on all oxygen-fuel torch sets.

### **3.7 Concrete and Masonry Construction**

- A. The creating prime contractor must guard all protruding reinforcing steel to eliminate impalement hazards.
- B. Protective gloves are required when there is skin contact with wet concrete.
- C. Concrete – Structural Concrete
  1. Do not remove any forms or shoring until a determination has been made by the testing lab that the concrete has gained sufficient strength to support its own weight and that of superimposed loads.
  2. Loads shall not be placed on newly constructed concrete structures or fill on decks until the concrete has reached its specified compression strength unless otherwise accepted by the structural engineer of record. Prime Contractor shall be the point of contact for information regarding this requirement.
  3. Where concrete shoring/reshoring is employed, a shoring/reshoring plan specific shall be available for review at the project site.
    - a. Deviations from the shoring/reshoring plan will require the issuance of a new shoring/reshoring plan.
    - b. The addition of superimposed loads on the floor (such as equipment and/or materials) that are not listed in the reshoring plan shall be construed as a deviation from the plan.
- D. Concrete – Pouring and Pumping Operations
  1. Permanent and temporary power lines shall be identified prior to the start of a concrete pour. Appropriate safeguards shall be implemented for the pumping, pouring and finishing operations.
  2. A project site traffic control plan shall be established for concrete truck traffic. Trained Spotters and Flaggers shall be used as necessary for public and personnel safety.
  3. Those involved in pouring and finishing activities shall have appropriate personal protection equipment (PPE), including gloves, mud boots, over boots, rubber boots, and eye protection.
  4. Concrete truck washout receptacles shall be in an area acceptable to Construction Manager and located out of vehicular and pedestrian travel areas.
  5. Diapers or equivalent shall be provided for the pump and concrete trucks when the truck to pump transfer occurs in a public street or other public area.
  6. Provide a project site logistics plan for each pump location that includes provisions for concrete truck traffic routing and control, as well as pedestrian traffic routing and control (if applicable).
- E. Coring, Cutting, Chipping, Drilling, Grinding, Profiling, and Sanding
  1. All areas of work are to be reviewed for possible impact to any existing conditions.

- a. Consider what is or may be on the other side of concrete that is being cored, cut or chipped (occupied area, system piping, embedded anchors, structural member, and soil).
  - b. Consider what is or may be embedded in the concrete (conduit, reinforcing steel).
  2. If it is determined, there is any potential of embedded items in the concrete, a sub-surface investigation must be performed by the Prime Contractor (e.g. pacometer, ferro-scan, x-ray, and ground-penetrating radar). A twelve foot (12 ft) area on either side of the planned area shall be scanned.
  3. ANSI-Approved face shield and eye protection and the appropriate respiratory protection is required.
  4. Dry cutting, coring, chipping, drilling, grinding, profiling, and profiling of concrete or masonry is prohibited.
  5. Wet method or local exhaust ventilation is required to control respirable crystalline silica, dust and airborne particulates. Additional requirements can be found in section 3.38 – Silica and Dust Exposure Protection.
- F. Masonry Construction
1. Masonry walls shall be braced and/or supported as required by Cal/OSHA and/or local requirements.
  2. Clear Zone - Unauthorized personnel shall be prohibited from entering the work area.

### **3.8 Confined Space (See Air Monitoring for Additional Requirements)**

- A. Prime Contractor shall submit a written Program addressing confined space entry and rescue procedure.
  1. Must abide by the applicable Cal/OSHA standards for all confined space entry operations and furnish all appropriate personnel, equipment, and support.
  2. Obtain permits required for confined space entry programs. Submit a copy to Construction Manager for record.
- B. Prime Contractor shall ensure that a Competent Person identifies all confined spaces in which their personnel may enter.
- C. All confined spaces will be treated as permit required confined space until proven otherwise by the Competent Person.
- D. Those entering must be trained in the hazards of confined space work, including operating and rescue procedures, the use of respiratory equipment, and instructions as to the hazards they may encounter.
- E. Provide all necessary entry-rescue equipment required for all entries into confined spaces (e.g. tripod, full body harness and lifeline or equivalent) as required by the applicable Standard. Wrist straps may be used in designated areas instead of full body harness.
- F. Prior to entry into a confined space, ensure all lines that may convey flammable, injurious, or incapacitating substances into the space are disconnected, blinded, or blocked off by other positive means in accordance with Lockout/Tagout (LOTO) regulations.
- G. Prior to entry into confined space, test the air with an appropriate device or method for: (1) Oxygen content, (2) Flammable gases and vapors, and (3) Potential toxic air contaminants. A written record shall be made and kept at the project site.
- H. The confined space shall be emptied, flushed, or otherwise purged of flammable or injurious substances to the extent feasible. Proper ventilation equipment is required.
- I. Whenever an atmosphere free of dangerous air contamination and/or oxygen deficiency cannot be ensured, the Prime Contractor shall provide NIOSH approved respiratory equipment to personnel who are involved in a comprehensive respiratory protection program in accordance with applicable Cal/OSHA standards.

- J. Where standby personnel are required, they must have a valid certificate in First Aid and CPR training from the American Red Cross, or equivalent training verified by documentary evidence.
- K. Visual contact or two-way radio communication must be available at all times.
- L. Must establish a means of communication with outside emergency services.
  - 1. Provide a 2-way form of communication:
    - a. from inside to outside and
    - b. outside to 911.
  - 2. This procedure must be made available to all those that enter and/or those on standby.

### **3.9 Connections to Utilities**

- A. The Prime Contractor shall not, nor allow any subcontractor to make any temporary service connections to electrical, water, air or steam utilities without prior approval of Construction Manager.
- B. Temporary connections shall comply with all applicable Federal, State, and local regulations.
- C. Temporary connections shall be inspected on a regular basis.

### **3.10 Crane Pick (Cranes, Boom Trucks and Rigging)**

- A. A written "Lift Pick" plan for all crane picks regardless of the capacity must be submitted to Construction Manager. The following documents must be included:
  - 1. Copies of the Crane Certifications (annual and quadrennial).
  - 2. Copy of the Crane Operator's Certification.
  - 3. The name and supporting documents for qualified riggers and signal persons, which will be provided by the Prime Contractor.
  - 4. Refer to Exhibit "C.4" – "Lift Pick & Critical Lift Pick" for the form.
- B. Cranes and derricks exceeding three (3) tons rated capacity, and their accessory gear shall not be used until the employer has ascertained that such equipment has been certified as evidence by current and valid documents attesting to compliance with the following:
  - 1. Test and examinations shall be conducted annually by a currently licensed certifying agency or designee in the certifying agency license, and a certificate shall be issued by the certifying agency.
  - 2. Current annual and quadrennial inspection certificates shall be maintained on each crane.
- C. A licensed certifying agency or designee in the certifying agency license shall re-inspect any crane that is involved in any incident or is damaged during set-up or operation, and a new certificate of inspection issued prior to being returned to service.
- D. Only operators authorized by the Prime Contractor that are trained and certified in the safe operation of cranes or hoisting apparatus shall be permitted to operate such equipment.
  - 1. Operators shall have valid evidence of current Licensing or Certification in accordance with State and Local requirements.
  - 2. Operators not having such evidence shall not be permitted to operate applicable machinery.
- E. Outriggers shall be fully extended during all lifts. If geometry factors prevent fully extending the outriggers, they need to be extended as far as possible and "off the rubber" load charts limits shall be used.
- F. Picks "off the rubber" will not be permitted, regardless of load.
- G. When required by the manufacturer's or certifying agent's instructions, outriggers shall be set so that wheels or crawler tracks within the boundary of the outriggers shall be relieved of all weight by the outrigger jacks or blocking.

- H. Plates, pads or mats shall be used under the outriggers or crawlers of all cranes and shall be of suitable material and size to support the crane on the surface that it is set upon.
- I. All mobile cranes having either a maximum rated boom length exceeding 200 feet or a maximum rated capacity exceeding 50 tons shall be equipped with a load indicating device or a load movement device.
- J. Any crane that meets the following, must file a Notice of Proposed Construction or Alteration (Form 7460-2) with the FAA for approval:
  - 1. Greater than 200 feet in height.
  - 2. Within 20,000 feet of a public and/or military airport and exceeds 100:1 (H:V) in surface elevation.
- K. Cranes shall be equipped with a boom angle or a boom radius indicator and clearly legible load chart in clear view from the Operator's position.
- L. An effective, audible warning and operating signal device (such as a horn) shall be provided on the outside of the crane. The controls shall be in easy reach of the Operator.
- M. The Qualified Person shall:
  - 1. Visually inspects the crane, derrick or hoist's controls, rigging and operating mechanism prior to the first operation of any work shift.
  - 2. Records daily inspections by the operator or other Qualified Person shall be maintained on the crane and must be available for review upon request.
  - 3. Adjustments and repairs to the crane.
  - 4. Where the weight of the load being handled is unknown and may approach the rated capacity, shall determine the magnitude of the load unless the crane is equipped with a load-indicating device.
- N. The Prime Contractor responsible for the hosting activity shall provide a Qualified Person to direct the lift. The Qualified Person shall see that:
  - 1. The crane is properly leveled for the work being performed and blocked where necessary.
  - 2. The load is well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches.
- O. A designated person shall monitor the clearance between crane booms, load lines, and loads, and power lines and alert the Operator when necessary.
  - 1. For power lines rated 50kV or less, minimum clearance between the lines and any part of the crane or load is 10 feet.
  - 2. Power lines rated over 50kV, minimum clearance between the lines and any part of the crane or load shall be at least 20 feet. If 20 feet is not achievable, the Prime Contractor shall schedule a formal meeting with Construction Manager to review clearance tables, de-energize power, and alternatives.
- P. A qualified signal person shall be provided when the point of operation is not in full and in direct view of the operator unless a signaling or control device is provided. Only one person shall be permitted to give signals to the operator.
- Q. A fire extinguisher of not less than 10-B:C rating shall be kept in serviceable condition and readily accessible to the Operator.
- R. Operations shall be conducted and the job controlled in a manner to prevent loads from being passed directly over anyone, occupied workspaces, or occupied passageways.
- S. Any personnel involved in the operation may give a "stop" signal if such a signal is warranted.

- T. A legible chart depicting and explaining the system of crane signals used shall be conspicuously posted in the vicinity of the hoisting operation.
- U. No one shall be permitted to ride on loads, hooks, or slings of any derrick, hoist, or crane.
- V. Swing radius protection shall be provided where a rotating crane is positioned to operate in areas where people may be caught between rotating parts and fixed objects or non-rotating crane components.
- W. Tag lines, restrain lines, or guide ropes shall be used on all loads except where their use presents a greater hazard. Such lines or ropes should be insulated to prevent shock, and shall not contain knots or splices that may snag on an object.
- X. Cranes, hoists, or derricks shall not be left unattended while the load is suspended.
- Y. Before leaving the crane unattended, the Operator shall:
  - 1. Land or properly secure any attached load.
  - 2. Disengage clutch (if applicable).
  - 3. Set travel, swing, boom brakes, and other locking devices unless otherwise specified by the certifying agents.
  - 4. Put controls in the "off" position.
  - 5. Stop the engine.
  - 6. Secure the crane against accidental travel.
- Z. Rigging, Slings, and Hooks
  - 1. Hoisting hooks shall be of the safety latch-type.
  - 2. Crane hooks with cracks or with deformation of throat opening more than 15% in excess of the normal opening, or more than 10-degrees twist from plane of unbent hook, shall be removed from service.
  - 3. Ropes shall be inspected for proper lubrication, excessive wear, broken strands, and proper weaving.
  - 4. Each day before use, slings and all fastening and attachments shall be inspected for damage or defects by a Qualified Person. Any wears showing deformation or damage will be permanently removed.
  - 5. "Free Rigging" (lifting from forks of forklift without manufacturers engineering attachment) will not be permitted for any reason.
  - 6. In order to determine proper time for replacement, a continuing inspection record shall be maintained for hoisting ropes. Conditions such as the following shall be reason for replacement:
    - a. In running ropes, 6 randomly distributed broken wire in one rope lay, or 3 broken wires in one strand in one lay.
    - b. Wear of 1/3 the diameter of the outside individual wires.
    - c. Kinking, crushing, bird caging, or other damage resulting in distortion of the rope structure.
    - d. In stranding ropes, more than 2 broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
    - e. Reduction of rope diameter below nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.
  - 7. Fixtures are usually attached to wire rope by the use of wire rope clips. The clips must be attached with the inside curve of the U-bolt against the dead, or short end of the wire rope, and flat clip (saddle) against the live, or long end of the wire rope.
  - 8. Slings shall have permanently affixed tags stating the:
    - a. Manufacturer's name or trademark.
    - b. Rated capacity.
- AA. Multiple lift shall only be performed if the following criteria are met:
  - 1. A multiple lift rigging assembly is used.
  - 2. A maximum of five members are hoisted per lift.

3. Rigging procedures shall prevent hazardous contact between the structural steel members being hoisted, adjacent structures or anyone.
4. Only beams and similar structural members are lifted.
5. Anyone engaged in the multiple lift have been trained in these procedures in accordance with Cal/OSHA.
6. No crane is permitted to be used for a multiple lift where such use is contrary to the manufacturer's specifications and limitations.
7. Components of the multiple lift rigging assembly shall be specifically designed and assembled to support the maximum capacity for the total assembly and for each individual attachment point. This capacity, certified by the manufacturer, shall be based on the manufacturer's specifications with a 5 to 1 safety factor for all components.
8. Multiple lift rigging assembly shall be rigged with members:
  - a. Attached at their center of gravity and maintained reasonably level.
  - b. Rigged from top down.
  - c. Rigged at least 7 feet apart.
  - d. The members on the multiple lift rigging assembly shall be set from the bottom up.

### **3.11 Critical Lift**

- A. Lifts that exceed 75% of the rated capacity of the crane or derrick, or requires the use of more than one crane, derrick, or lifting device; or is deemed a critical lift by the Owner or Construction Manager by reason of potential negative consequences to safety, structure, or schedule; in addition to the above requires the following:
  1. A Critical Lift Plan shall be prepared by a Qualified Person. The Qualified Person preparing the plan may be the crane operator, lift supervisor, or rigger and a copy provided to the prime contractor(s) and Construction Manager.
    - a. The crane operator, lift supervisor, and rigger shall participate in the preparation of the plan.
    - b. The plan shall be reviewed by, and signed by, all personnel involved with the lift.
    - c. The plan shall specify the exact size and weight of the load to be lifted and all crane and rigging components that add to the weight. The manufacturer's maximum load limits for the entire range of the lift as listed in the load charts shall also be specified.
    - d. The plan shall specify the lift geometry and procedures, including the crane position, height of the lift, the load radius, and the boom length and angle, for the entire range of the lift.
    - e. The plan shall designate the crane operator, lift supervisor, and rigger, and state their qualifications.
    - f. The plan will include a rigging plan that shows the lift points and describes rigging procedures and hardware requirements.
    - g. The plan will describe the ground conditions, outrigger or crawler track requirements, and, if necessary, the design of mats necessary to achieve a level, stable foundation of sufficient bearing and capacity for the lift.
    - h. The plan will list environmental conditions under which lift operations are to be stopped.
    - i. The plan will specify coordination and communication requirements for the lift operation.
    - j. For tandem or tailing crane lifts, the plan will specify the make and model of the cranes, the line, boom and swing speeds, and requirements for an equalizer beam.
  2. Refer to Exhibit "C.4" – "Lift Pick & Critical Lift Pick" for the form.
  3. Critical lift plans shall be submitted to the Construction Manager.

### **3.12 Demolition**

- A. Demolition work shall at all times be under the immediate supervision of a Qualified Person with the authority to secure maximum safety for personnel engaged in demolition work.
- B. Obtain AQMD permit and forward a copy to Construction Manager.
- C. Prior to permitting and the start of demolition operations, the Qualified Person shall make a survey of the structure to determine the condition of the framing, floors, and walls, and the possibility of an unplanned

collapse of any portion of the structure. Any adjacent structure where personnel may be exposed shall also be similarly checked.

1. The survey shall be in written form, kept on the project site and submitted to Construction Manager.
- D. Utility companies shall be notified and all utility services shut off, capped, or otherwise controlled, at the building or curb line before starting demolition. The Prime Contractor is responsible to verify that these actions have been taken.
1. The Prime Contractor shall develop an Emergency Call List for all known utility owners prior to the start of demolition activities.
  2. A project site plan shall be marked up to show the locations of known utilities, and the nearest identified shut-off valves/controls. Construction Manager shall be provided a copy. Verify that the shut-off valves/controls are working properly prior to work beginning.
- E. Confirm existing alarm systems have been identified and taken out of service prior to commencing demolition operations. Alarm services shall be notified that the alarm will be taken out of service before taking the system out of service.
- F. Determine any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property.
- G. When the presence of hazardous substances is apparent or suspected, Prime Contractor shall stop work and notify Construction Manager. Material such as but not limited to:
1. Pipe-covering insulation, steel beam and column fire protection, HVAC duct, VCT, plaster, acoustical tile and flooring adhesive shall be surveyed for asbestos.
  2. Paint and ceramic tile shall be surveyed for lead.
- H. During demolition, continuing inspections shall be made as the work progresses to detect hazards resulting from weakened, load burdened, or deteriorated floors or walls or loosened materials.
1. Ensure that floor load limits are not exceeded during demolition operations.
  2. Disperse demolition equipment throughout the structure and remove demolished materials to prevent excessive loads on supporting walls, floors or framing.
- I. Adequate dust control measures shall be provided during demolition, stockpiling and loading operations.
- J. Walking across exposed floor joists, steel beams, or girders is prohibited.
- K. Provide passage for others around the area of demolition. Conduct operations to prevent damage to adjacent buildings, structures, other facilities, and people.
- L. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement or collapse of structures to be demolished and to adjacent facilities.
- M. Demolish concrete and masonry in sections. Use bracing and shoring to prevent collapse.

### **3.13 Electrical**

- A. Electrical work on live circuits will be only permitted by a qualified electrician. NFPA 70E arc flash requirements must be followed.
- B. All temporary power panels shall have covers installed at all times by the Prime Contractor. All circuits must be clearly labeled.
- C. Supply ground fault circuit interrupters (GFCI) for all temporary electrical wiring cords and equipment.

1. GFCI shall be tested in accordance with manufacturer's requirements. Logs shall be maintained of all such testing.
  2. GFCI with an automatic reset feature are not permitted on the project site.
  3. Assured grounding may be used in conjunction with GFCI protection but is not permitted as an alternative to GFCI protection.
  4. Provide monthly inspections.
- D. Temporary lighting shall not be suspended by its' extension/power cord.
- E. Temporary lighting must be equipped with guards to prevent contact with the bulb.
- F. Romex cable will not be permitted to be used as electrical cord.
- G. Prime Contractor shall ensure that all temporary power cords are at least 12awg heavy-duty construction grade, are in good condition, and have correct voltage and amperage rating.
- H. When feasible, all temporary power cords shall be secured above the floor to avoid trip hazards in walking and working surface areas.
- I. Outdoor cables must be protected from damage from pedestrian and vehicle traffic.
- J. Ground pins shall not be removed from electrical cords.
- K. Damaged or defective tools and cords shall be removed from service.
- L. Power tools must be double insulated or grounded properly and inspected prior to use.
- M. Properly Lockout /Tagout (LOTO) any equipment within the Prime Contractor's responsibility. Control of the Lockout/Tagout is also the Prime Contractor's responsibility.
- N. The Prime Contractor shall coordinate instances that require multi- prime contractor Lockout/Tagout activities.

**3.14 Elevating Work Platforms and Aerial Devices (e.g. Boom-lift, Scissor-lift)**

- A. Only authorized and trained personnel shall operate an aerial device or elevating work platform. Training records shall be maintained on the project site for review.
- B. All aerial devices or elevating work platforms will be subject to a comprehensive inspection. Aerial or elevating work platforms will need to be inspected daily before use. Noncompliant equipment will not be permitted.
- C. Boom, basket, platform load limits specified by the manufacturer shall not be exceeded.
- D. No one shall sit or climb on the edge of the basket or platform or use planks, ladders, guardrails or other devices to gain greater height.
- E. No one shall work off of elevated work platforms or aerial devices when exposed to winds 30mph or greater.
- F. Elevating Work Platforms:
1. An elevated work platform is a device designated to elevate a platform in a substantially vertical axis (vertical tower, Scissor Lift).
  2. The railing protection shall be 42 inches high, plus or minus 3 inches, with a mid-rail at the half-way height point. Where the guardrail is less than 39 inches high, an approved personal ANSI certified fall protection system shall be used.

3. Powered elevating work platforms shall have both upper and lower control devices. Controls shall be plainly marked as to their function and guarded to prevent accidental operation.
  4. An emergency stopping device shall be provided at the upper controls of elevating work platforms.
- G. Aerial Device
1. An aerial device is any vehicle-mounted or self-propelled device, telescoping extendible or articulating, or both, which is primarily designed to position personnel.
  2. Belting off to an adjacent pole, structure, or equipment while working from an aerial device is not permitted.
  3. Lift controls shall be tested in accordance with the manufacturer's recommendations or instructions prior to use to determine that such controls are in safe working condition.
  4. Aerial baskets or platforms shall not be supported by adjacent structures when personnel is on the platform or in the baskets while in an elevated position.
  5. While in an elevated aerial device, personnel shall be secured to the identified anchorage point through the use of a full body harness and lanyard for fall protection.

### **3.15 Emergency Action / Evacuation**

- A. Prime Contractor is obligated to notify the Construction Manager and the other prime contractors if their work activities will have an impact on the project site emergency action plan.

### **3.16 Equipment / Tools**

- A. Prime Contractor equipment and tools must be in proper working condition and routinely (e.g. daily or prior to use) inspected for defects and removed from use if found to be defective.
- B. Any equipment or tool found to be damaged or defective must be removed from service and repaired before it can be returned to service.
- C. Manufacturer's instructions shall be followed with respect to equipment/tool operation and training requirements.
- D. Equipment is not to be used with loads that exceed the recommended rated capacity.
- E. Prime Contractor is to use only their equipment and tools, and not those of other prime contractors, unless they are properly trained and authorized.
- F. Tools and equipment are to be used for their designated purpose.
- G. Tools and equipment are to be used only by trained and authorized personnel.
- H. Proper guards or shields must be installed on all power tools before use. All guards must be manufactured by and/or approved by the manufacturer for that particular piece of equipment.
- I. "Wedging" or "Pegging" guards on circular saws or other equipment, rendering them non-functional, is not permitted.
- J. No internal combustion vehicle or machinery is to be operated inside a structure unless proper controls have been implemented to minimize carbon monoxide levels.
- K. Tools and equipment must be properly stored, secured and located away from unauthorized access.
- L. For pneumatic power tools, all air hoses exceeding ½ inch inside diameter shall have a safety device (commonly known as "OSHA valve" or "safety check valve") at the source of air supply or branch line origin (such as a manifold) to reduce pressure in case of hose failure.

M. Do not lift or lower portable electric tools by means of the power cord. Use a rope or handle.

### 3.17 Explosives

- A. Blasting activities will be done in accordance with state, and local regulatory requirements.
- B. Blaster must have all required federal, state, and local permits. A copy of the permits shall be forwarded to the Construction Manager. The actual permit shall be present on the jobsite during blasting operations.
- C. Blaster must have a current valid California "Blaster's License" issued by Cal/OSHA. The license shall be physically present on the project site to accomplish the blasting operation and/or direct and supervise others in such operations.
- D. Prime Contractor to submit a written "Evaluation of potential rock blasting impacts and recommended practices" to Construction Manager.
- E. Prime Contractor to submit a written "Blasting plan" to Construction Manager, which would include, but may not be limited to, procedures for:
  - 1. Storage, handling, transportation, loading, and firing of explosives.
  - 2. Communication with authorities and landowners.
  - 3. Pre- and post- blast inspections.
  - 4. Mitigation controls for flying rocks, noise reduction, and misfires.
  - 5. Safety procedures (e.g. fire prevention, signs and flagmen, and warning signals).
  - 6. Mitigation of environmental impacts.
  - 7. Disposal of waste blast material.
  - 8. Blasting adjacent to existing overhead or underground utilities, roadways or trails, environmentally sensitive areas, farmlands, or areas with potential geologic hazards.
- F. No smoking, open flames or other sources of ignition within 50 feet of any area where explosive materials are being handled, except devices necessary to ignite the fuses of set charges.
- G. Empty boxes, paper and fiber packing materials which have previously contained high explosives shall not be used again for any other purpose. They shall be destroyed by burning at an isolated location outdoors, and no person shall be nearer than 100 feet after the burning has started.
- H. Tamping poles or devices shall be made of wood or plastic materials manufactured for tamping explosives.
- I. Loading shall not commence until all drilling is completed and drill holes are cleaned or blown out. When conditions justify simultaneous loading and drilling in the same area, such operations shall be separated as widely as practicable and in no case shall a drilling operation be closer than 50 feet to a hole being loaded.
- J. All drill holes shall be sufficiently large to freely admit the insertion of the explosive materials.
- K. No holes shall be loaded except those to be fired in the next round of blasting.
- L. Use only lights specifically designated to be used within 50 feet of the loading area.
- M. Loading operations shall be carried on with the smallest practical number of persons and explosive materials loading equipment present and no one but the loading crew, inspection personnel, and authorized supervisory personnel shall be allowed within 50 feet of the loading area.

- N. Holes to be blasted shall be charged as near to blasting time as practical and such holes shall be blasted as soon as possible after charging has been completed.
- O. Areas in which charged holes are awaiting firing shall be guarded or barricaded and posted or flagged against unauthorized entry.
- P. When blasting under, or near overhead power lines, all loaded holes shall be covered with a nonconductive blasting mat anchored to prevent the mat or other material from being blown into the overhead lines.
- Q. Drilling shall not be started until all remaining butts of old holes are examined for unexploded charges and if any are found, they shall be detonated or properly disposed of before other work proceeds.
- R. The licensed blaster-in-charge shall fix the time of blasting.
- S. Blasts are not to be fired until the licensed blaster-in-charge verifies the following:
  - 1. All surplus explosive materials are in a safe place,
  - 2. All security personnel at the blast area are in the proper location, and
  - 3. All personnel are either outside of the blast area or under sufficient cover.
- T. Before adopting any system of electrical firing, the licensed blaster shall conduct a thorough survey for extraneous currents, and all dangerous currents shall be eliminated before any holes are loaded.
- U. Blasts are not to be fired without a warning signal/procedure. The signals, which may be given by a siren, air horn, whistle or other device, shall be loud enough to be heard clearly in areas that could possibly be affected by the blast or flying rock from the blast.
- V. Warning signals shall be given by the use of a compressed air whistle, a horn, lights or equivalent means, such as flaggers or voice warning and shall be clearly audible at the most distant point in the blast area. Where other than flagger or other visible method or voice warning is used, the following signals are recommended:
 

WARNING SIGNAL	5 minutes prior to the blast	A 1-minute series of long audible signals
BLASTING SIGNAL	1 minute prior to the blast	A series of short audible signals
ALL-CLEAR SIGNAL	Following inspection of the blast area	A prolonged audible signal
- W. The "ALL CLEAR" signal shall not be given until the licensed blaster has made a thorough, visual inspection of the blast area for misfires.
- X. Whenever blasting is being conducted in the area immediately adjacent to gas pipelines, flammable liquid gas pipelines, electric, water, fire alarm, telephone, telegraph, and steam utilities, the licensed blaster shall notify the appropriate representatives of such pipelines or utilities at least 24 hours in advance of blasting, specifying the location and intended time of such blasting. Verbal notice shall be confirmed with written notice before the blast.
- Y. After blasting, the blasting crew shall wait at least 5 minutes before returning to the point of blasting.
- Z. If any misfires are found, or suspected to exist, they shall be reported to the person in charge. Steps shall be taken to eliminate all undetonated explosive materials.

- AA. In case of a detonator misfire, the shot area shall be made safe under competent supervision by one of the following means after a 30-minute wait following electric or non-electric shock tube blasting, or a 60-minute wait following fuse cap blasting.
- BB. No other work shall be performed in the danger area except that necessary to remove the hazard of the misfire. No other personnel except the licensed blaster and the necessary crew shall be in the danger area when a misfire hazard is being removed.

### **3.18 Fall Protection**

- A. 100% Fall Protection shall be implemented for all fall exposures of six (6) feet or more whether moving or stationary in an unprotected elevation, and anytime where a fall could occur from a surface that is not protected by handrails, hole-covers, guardrails or other appropriate fall elimination device.
- B. Where a fall hazard exists, efforts must be made to eliminate the hazard; provide protection against the hazard; or establish alternative methods to control/monitor the hazard.
- C. Any personnel approaching within six (6) feet of any skylight shall be protected from falling through the skylight or skylight opening.
- D. Toeboards, debris netting (e.g. snow fence), or equivalent type material, shall be used at the perimeter of structures where other operations, facilities or people could be impacted by falling debris.
- E. Rescue shall be addressed in the fall protection policies and fall protection training.
- F. Methods of fall protection include:
  - 1. Guardrails and toeboards.
  - 2. Covers for floor and roof openings, pits, trap-doors, and temporary floor openings.
  - 3. Personal Fall Arrest System (PFAS).
  - 4. Personal Fall Restraint System (PFRS).
  - 5. Positioning Device System.
  - 6. Safety Nets.
  - 7. Scaffold Platforms.
  - 8. Roof Warning Lines.
- G. The implementation of the fall protection plan shall be under the supervision of a Competent Person.
- H. Prime Contractor shall submit to Construction Manager a project site specific written fall protection plan prepared by a Qualified Person and developed specifically for work activities exceeding six (6) feet in elevation requiring fall protection. The fall protection plan must be signed by the Prime Contractor's:
  - 1. Qualified Person who created the plan
  - 2. Competent Person supervising operations covered by the plan
  - 3. Prime Contractor's Project Manager
  - 4. Prime Contractor's Project Foreman/Supervisor
- I. Submit to Construction Manager documentation of training on Personal Fall Arrest System (e.g. harness, lanyard, anchor point) if anyone will be utilizing a body harness.
- J. Each personal fall arrest system shall be inspected by a Competent Person in accordance with the manufacturer's recommendations. The date of each inspection shall be documented.
- K. Personal Fall Arrest Systems (PFAS) shall limit the fall distances to a maximum of six (6) feet and prohibit personnel from contacting a lower level or structure element.

- L. The only type of body restraint system allowed is full body harness with a lifeline, lanyard, and deceleration device. Safety belts or body belts are not permitted for fall arrest.
- M. All personal fall arrest, personal fall restraint and positioning device systems shall be labeled as meeting the requirements contained in ANSI A10.14-1991.
- N. Where practical, the anchor end of the lanyard shall be secured at a level not lower than personnel's waist.
- O. Lifeline and anchorages shall be capable of supporting a minimum dead weight of 5,000 pounds.
- P. Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds.
- Q. Anchorages used for attachment of personal fall arrest equipment:
  - 1. Shall be independent of any anchorage being used to support or suspend platforms.
  - 2. Capable of supporting at least 5,000 pounds per person or part of a complete personal fall protection system used under the supervision of a Qualified Person that maintains a safety factor of at least two (2).
- R. The use of non-locking snap hooks is prohibited.
- S. Residential and light commercial projects
  - 1. Framers shall follow Cal/OSHA regulations for fall protection associated with their type of work activities, which would typically require fall protection at 15ft or higher.

### **3.19 Fire Protection and Prevention**

- A. Each Prime Contractor is responsible for conducting a monthly inspection of their fire extinguishers to ensure they have not been damaged, discharged or gone missing.
- B. Portable fire extinguishers.
  - 1. Shall be fully charged, inspected monthly, serviced annually and have inspection tag.
  - 2. Fire extinguishers rated not less than 10B (e.g. 2A:10BC), shall be provided within 50 feet of any area where more than 5 gallons of flammable or combustible liquids are stored.
  - 3. Fire extinguisher rated at least 10-B:C, shall be kept near operations where fuel gas cylinders/bottles are being used.
  - 4. Fire extinguishers shall be readily available for use where temporary heating devices are used.
- C. Storage of more than 25 gallons of flammable liquids or 60 gallons of combustible liquids shall be in a NFPA approved storage cabinet. Not more than 120 gallons of Class I, II, or IIIA liquids may be stored in a storage cabinet.
- D. "No Smoking" signs shall be posted as required by operations or material exposures.

### **3.20 Flammables and Combustibles**

- A. Prime Contractor is required to supply fire extinguishers, fire blankets, and other sufficient fire protection devices for the immediate work area where flammable and combustible material is stored or used. All fire extinguishers must be provided by each Prime Contractor and rated at least a minimum of 2A:20B-C. (For additional information, refer to Fire Protection and Prevention section).
- B. Any supplied flammable liquids must be stored in FM approved or UL listed safety containers.
  - 1. All containers must be properly labeled and stored when not in use.
  - 2. Only FM approved or UL listed, or DOT metal safety cans will be allowed for flammable storage. (NO PLASTIC FUEL CANS).

- C. Prime Contractor shall identify non-compatible materials in advance and provide for separate storage as required.
- D. All outside storage areas must be at least 20 feet from any building.
- E. For roof work:
  - 1. No more than a one-day supply of flammables may be placed on the roof during working hours.
  - 2. All flammables must be removed from the roof at the end of each workday by the Prime Contractor.
  - 3. At least two (2) fire extinguishers appropriate for the type and quantity of flammable materials present must be provided if flammables are present.
- F. Any supplied flammable and combustible materials must be kept away from sparks, heaters, and any other heat source.
- G. Empty containers of flammable and hazardous materials shall be removed from the project site as soon as possible.

### **3.21 Floor, Roof, and Wall Openings**

- A. Prime Contractor shall be responsible for covering floor, roof and wall openings it has created.
  - 1. Covers must be able to support at least 400 pounds or twice the weight of the anticipated load.
  - 2. Must be secured to prevent accidental removal or displacement.
  - 3. Must be labeled "Hole" or "Cover".

### **3.22 Forklifts (Industrial Trucks and Tractors)**

- A. Only drivers authorized by the Prime Contractor and trained in the safe operations of industrial trucks shall be permitted to operate forklifts.
- B. Operator training and posting of information regarding forklift operations shall be in accordance with applicable Cal/OSHA Standards.
- C. Prime Contractor shall certify that each Operator has been trained and evaluated. Training records (Operator cards) must be available for review at all times for the piece of equipment they are operating.
- D. All forklifts and industrial trucks and tractors shall be equipped with an audible back-up alarm which can be clearly heard from a distance of 200 feet. In congested areas or areas with high ambient noise which obscures the audible alarm, a signal person in clear view of the operator shall direct the backing operation.
- E. Every industrial truck and tractor shall be equipped with operable brakes, a parking brake, and a horn.
- F. The rated capacity of all industrial trucks and industrial tractors shall be displayed at all times on the vehicle in such a manner that it is readily visible to the Operator.
- G. Forklifts (Industrial Trucks and Tractors) shall not be loaded in excess of their rated capacity.
- H. Seat belts shall be provided and worn on industrial trucks and tractors where rollover protection is installed and Operator shall be instructed in their use.
- I. No riders shall be permitted on vehicles unless the vehicles are equipped with adequate riding facilities.
- J. No one shall ride on or be elevated on the forks of lift trucks.
- K. Industrial trucks may be used to elevate personnel in accordance with applicable Cal/OSHA Standards and manufacturer's recommendations using appropriate personnel platforms.

- L. No one shall be allowed to stand, pass, or work under the elevated portion of an industrial truck, loaded or empty.
- M. Operators shall check the vehicle at least once per shift. Attention shall be given to tires, horn, lights, battery, controller, brakes, steering mechanism, cooling system, and the lift system (forks, chains, cable and limit switches).
- N. Operators shall not exceed the authorized or safe speed, always maintain a safe distance from other vehicles, keeping the truck under positive control at all times.
- O. Operators shall slow down and sound the horn at cross aisles and other locations where vision is obstructed.
- P. Grades shall be ascended or descended slowly.
- Q. The forks shall always be carried as low as possible, consistent with safe operation.
- R. When leaving a vehicle unattended, the power shall be shut off, brakes set, the mast brought to the vertical position, and forks left in the down position.
- S. "Free Rigging" is not permitted. If loads are to be suspended from the forklift, it must be with the appropriate manufacturers approved attachment.

**3.23 Hazard Communication/Globally Harmonized System (GHS) Program**

- A. Prime Contractor shall maintain a copy of all Safety Data Sheets (SDS), chemical inventory list for all hazardous substances used at the project site by their firm, as well as all hazardous substances used at the project site by all subcontractors.
- B. In accordance with the provisions of the Hazard Communication / GHS standard, Prime Contractor must have a comprehensive written Hazard Communication Program which includes:
  - 1. A list of hazardous substances known to be on the project site.
  - 2. Methods the Prime Contractor will use to inform personnel of the hazards of non-routine tasks.
  - 3. The program shall include methods the Prime Contractor will use to inform other prime contractor(s) of any precautionary measures.
  - 4. The methods used to provide other prime contractor(s) with access to Safety Data Sheets (SDS).
  - 5. The methods the Prime Contractor will use to inform the other prime contractor(s) of the labeling system in use.
- C. Prime Contractor must submit a copy to Construction Manager prior to work starting:
  - 1. The Hazard Communication / GHS Program.
  - 2. Safety Data Sheets (SDS) for any hazardous substances that will be used on the job site.
- D. Prime Contractor must have a binder which contains the following items:
  - 1. A comprehensive written Hazard Communication / GHS Policy.
  - 2. A chemical inventory listing all hazardous materials brought onto or used on the project site by the Prime Contractor.
  - 3. Safety Data Sheets (SDS) for all hazardous materials used on the project site.
- E. Prime Contractor shall ensure their personnel have received training in the safe use of hazardous materials; and are able to read and understand the information on Safety Data Sheets (SDS). The training shall include at least:
  - 1. Methods and observations that may be used to detect the presence or release of a hazardous chemical.
  - 2. The physical and health hazards of the chemicals used in the work area.

3. Measures personnel can take to protect themselves from the hazards.
  4. Details of the Hazard Communication Program, including the labeling systems and the use of SDS.
- F. Prime Contractor shall ensure that all containers used on the project site are properly labeled as to their contents, including gas and diesel containers.

### **3.24 Hazardous Materials, Toxic Substances and Environmental Controls**

- A. Prime Contractor is responsible for the generation, management, and proper disposal of any hazardous material, toxic substances, or any related materials or substances, as defined or included in the definition of "hazardous material" under any applicable Federal, State, or Local Law, Regulation or Ordinance.
- B. Prime Contractor agrees to notify Construction Manager within 72 hours for approval:
1. Delivery of any large quantities (more than 55 gallons) of gasoline, diesel fuels and any solvent onto the project site.
  2. Approval to bring hazardous wastes on the project site or generate hazardous waste.
  3. Using any chemical or material creating noxious or toxic fumes.
  4. Such request may or may not be granted.
- C. Prime Contractor using any hazardous material or toxic substance shall notify all other prime contractors on the project site of their use, and what measures should be taken to prevent exposure.
- D. All incidents involving exposures to or releases of potentially hazardous substances must be reported immediately, verbally, and followed in writing within 24 hours to Construction Manager.
- E. Spills of hazardous materials (including cutting oil, fuel, solvents, and antifreeze) must be reported immediately to the appropriate regulatory agencies and to Construction Manager. The creating prime contractor responsible for the spill is responsible for cleanup costs.
- F. The creating prime contractor is responsible for proper disposal of its hazardous wastes. A copy of the completed Uniform Hazardous Waste Manifest must be provided to Construction Manager.
- G. Cutting equipment must have secondary containment (e.g. drip pans, sandboxes).
- H. All containers:
1. Drums, jugs and other containers must have secondary containment.
  2. Must be maintained in good condition and must be appropriate for the materials to be stored in them.
  3. All containers must be labeled with their contents and precautions for use.
  4. Hazardous waste containers must be labeled "Hazardous Waste" in addition to listing their contents on the label.
- I. Weekly inspection of the project site must be performed by each prime contractor to assure compliance with this section.
- J. Gasoline shall not be used for cleaning purposes.

### **3.25 Heaters – Portable Heaters**

- A. All heaters must be Factory Mutual and/or Underwriters Laboratory approved.
- B. The Prime Contractor must notify Construction Manager when liquid/gas fueled heaters brought onto the project site prior to use.
- C. Tent heater use requirements:
1. Use only in tents made of fire resistant material.

2. Avoid contact with heating elements or other hot parts.
3. Keep flammable materials and clothing away from hot equipment.
4. Never use heaters in a utility hole or in a tent that covers a utility hole.
5. Ensure adequate ventilation is provided when using a tent.
6. Secure a fire extinguisher within the tent in an accessible location.

**3.26 Heavy Equipment / Material Handling and Earthmoving Equipment**

- A. Equipment shall be maintained in good working order. All vital parts such as motors, chassis, blades, blade holders, tracks, drivers, hydraulic and pneumatic mechanisms, and transmissions must be inspected each day.
- B. Drivers must be specifically trained to operate the mobile equipment they intend to use. All Operators must follow manufacturers' operating and safety instructions. Training records must be available at the project site for review.
- C. Whenever visibility conditions warrant additional light, all vehicles, or combination of vehicles, in use shall be equipped with at least two (2) headlights and two (2) taillights in operable condition.
- D. All vehicles, or combination of vehicles, shall have brake lights in operable condition.
- E. All vehicles shall be equipped with an adequate audible warning device (horn) at the Operator's station.
- F. All vehicles and equipment must have a back-up alarm that is normally audible for a distance of 200 feet.
  1. In congested areas or areas with high ambient noise which obscures the audible alarm, a signal person in clear view of the operator shall direct the backing operation.
- G. All vehicles with cabs shall be equipped with windshields and powered wipers.
- H. Vehicles operating in areas or conditions that cause fogging or frosting of windshields shall be equipped with operable defogging or defrosting devices.
- I. Cracked or broken windshields shall be promptly replaced.
- J. Windshields and mirrors shall be kept clean such that vision is not compromised or obstructed.
- K. Seatbelts shall be provided and worn with the approved proper anchorage points.
- L. Trucks with dump bodies shall be equipped with positive means of support, permanently attached, to prevent accidental lowering of the body while maintenance or inspection work is being done.
- M. Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device that will prevent accidental starting or tripping of the mechanism.
- N. Trip handles for tailgates of dump trucks shall be so arranged that, in dumping, the Operator will be in the clear.
- O. All rubber-tired motor vehicle equipment shall be equipped with fenders.
- P. All vehicles in use shall be checked at the beginning of each shift for defects in:
  1. Service brakes, trailer brake connections, parking brake system, and emergency stopping systems (brakes).
  2. Tires, horn, steering mechanism, seat belts, operating controls and safety devices.
  3. Lights, reflectors, windshield wipers, defrosters, and fire extinguishers.

- Q. Before starting a job, the Operator shall be given instructions regarding the work to be done.
- R. Before starting the motor, the Operator shall check to make sure that all operating controls are in the neutral position.
- S. Before starting the equipment, or moving the equipment after re-entering the cab, the Operator shall walk entirely around the equipment to make sure no other personnel, equipment or material will be struck.
- T. Prime Contractor shall ensure that Operators of heavy equipment wear appropriate hearing protection devices when exposed to noise over 90dB.
- U. At no time shall a piece of equipment be left unattended while the motor is running, especially if the machine is on an inclined surface or on loose material.
- V. Block or chock wheels when parking on inclines.
- W. Machines shall be operated at speeds and in a manner consistent with conditions on the project site.
- X. No one other than the Operator shall ride on equipment.
- Y. During refueling operations equipment motors shall be turned off. Smoking is prohibited during refueling.
- Z. If possible, equipment shall be driven entirely off the roadway at night.
- AA. Unattended equipment must be left in a secure area not accessible to members of the public or unauthorized third parties. Keys shall be removed from unattended equipment.
- BB. Spotters and/or Flaggers must be used when equipment Operator's view is obstructed whether moving forward or backward.

### **3.27 Horizontal Boring / Pipe Jacking**

- A. Prior to boring/jacking operations the Prime Contractor must contact DIG ALERT to ensure all owners of underground facilities in the area are notified to mark their utility locations.
- B. The Prime Contractor shall locate all buried utilities (Pot hole) before commencing boring/jacking operations. No mechanical devices may be used to Pot hole. Hand dig only.
- C. Open a guide hole (bore slot) over any existing utility that is in line with the bore shot.
- D. Excavate bore slot, bell hole and guide holes as necessary.
- E. If resistance is encountered during the boring/jacking operation, cease the boring operation immediately and excavate at the point of resistance to determine necessary action.
- F. The Operator must be trained in the use of the boring/jacking machine.
- G. At least two people must operate the bore motor at all times.
- H. Stay clear of rotating bore pipe and the rotating head of boring machine. Loose clothing, long hair, or gloves can cause injury if caught in rotating bore pipe.
- I. Only one person shall transmit signals to the Operator.
- J. Do not hold rotating bore pipe with hands or feet.

- K. Operate the boring machine only at slow RPM's when connecting or disconnecting bore pipe.

**3.28 Housekeeping**

- A. Prime Contractor shall perform their work so as to maintain the project site in a clean, safe and orderly condition.
- B. Prime Contractor is responsible for clean-up and removal of their debris, excess material, trash, waste, and tools on a daily basis. All work areas shall be kept clean at all times. If Prime Contractor fails to perform this function, Construction Manager reserves the right to charge the Prime Contractor for clean-up performed on their behalf by others.
- C. All construction materials must be stored in an orderly manner.
- D. All exits and access ways must be kept unobstructed.
- E. Emergency exits must be available. Panic hardware, where present, must remain unobstructed.
- F. All work areas must be cleaned and free of debris.
- G. Puncture hazards (e.g. nails, staples, and fasteners) created by stripped formwork, scrap lumber, pallets, and shipping materials shall be eliminated or controlled.
- H. Metal containers with covers must be provided for disposal of oily and paint soaked rags.
- I. Walkways and sidewalks must be kept free of construction materials, debris, dirt, tools and extension cords.
- J. Where steel plates are used to bridge excavations or other similar type of construction activities in walkways or sidewalks, the leading edges of the steel plates must be tapered or feathered with temporary asphalt or other suitable materials to prevent trip hazards.
- K. Rubbish and construction debris bins must be structurally sound and designed for lifting. Bins should not be filled above their top edge and should be covered during lifting to prevent material falling out.
- L. Empty containers of flammable and hazardous materials shall be removed from the project site as soon as possible.
- M. Dry sweeping or dry brushing where such activities could contribute to exposure to respirable crystalline silica is not permitted. Wet sweeping, HEPA-filtered vacuuming or other method(s) to minimize exposure are required.

**3.29 Impalement Protection**

- A. Prime Contractor shall be responsible for protecting all impalement hazards (e.g. form stakes, rebar, and EMT) it has created by complying with Cal/OSHA standards for protecting impalement hazards (e.g. approved Cal/OSHA cap).
- B. Personnel exposed to protruding reinforcing steel or other similar projections, shall be protected against impalement hazard by guarding all exposed ends that extend up to six (6) feet with protective covers, or troughs.

**3.30 Ladders**

- A. Type II (Medium-Duty – 225 lbs. working load) and Type III (Light-Duty – 200 lbs. working load) ladders are prohibited.

- B. The Prime Contractor shall provide a training program for ladder use and stairways, as necessary. The program shall enable personnel to recognize hazards related to ladders and stairways, and the procedures to be followed to minimize these hazards.
- C. A Qualified Person shall inspect as frequently and after any occurrence that could affect their safe use.
- D. Broken or defective ladders must be immediately removed from service.
- E. Personnel must maintain 3-point contact while ascending or descending a ladder.
- F. Job-made ladders shall not be permitted unless they meet the requirements of the Cal/OSHA Standards.
- G. All types of ladders must be inspected at least daily for:
  - 1. Cracks, splits, splinters, and decay.
  - 2. Protruding nails and loose rivets.
  - 3. Loose, bent or broken braces, tie rods, guide irons, locks, pulleys and strand hooks.
  - 4. Broken, worn or defective spurs and pads.
- H. Extension Ladders.
  - 1. Portable ladder feet shall be placed on a substantial base.
  - 2. Straight and extension ladders must be tied-off or secured to prevent displacement.
  - 3. Metal ladders must not be used near energized equipment.
  - 4. No more than one person is allowed on a ladder.
  - 5. Ladders are not to be used for skids, braces, workbenches, or any other purpose other than climbing.
  - 6. All straight and extension ladders must be equipped with nonskid safety feet.
  - 7. Ladders must extend no less than 36 inches above the landing.
  - 8. Ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder (4:1).
- I. Step Ladders.
  - 1. Step ladders must be fully open and the spreader set in the open and locked position.
  - 2. Do not climb, stand or sit on the top two rungs.
  - 3. Do not lean a step ladder against a wall or other object in the unopened position.
  - 4. Always ascend and descend facing the ladder.
  - 5. Do not exceed the designated weight capacity.

### **3.31 Lead Abatement**

- A. The Owner shall identify any Lead Based Paint (LBP) within the proposed scope of work prior to any construction, remodeling, or demolition activities.
- B. The Owner shall identify any sheet lead, such as in laboratories and x-ray facilities prior to commencing demolition or construction activities.
- C. The Owner shall arrange for disposal of the hazardous waste stream (e.g. paint chips), through a waste disposal facility with a current California TSDF permit and obtain the EPA Hazardous Waste Generator Identification number.
- D. Personnel who performs lead abatement work shall have a current training certification by a California accredited lead trainer. The overseer of the work is the "Supervisor" as required by Cal/OSHA.
- E. All lead abatement and removal work must follow applicable regulations of Cal/OSHA, the Environmental Protection Agency (EPA), state, federal and local requirements.

- F. Prime Contractor must submit a copy of the “Lead-work pre-job notification” to Cal/OSHA and Construction Manager at least 24 hours before conducting lead-related work.
- G. Supervisor must conduct frequent and regular inspections of the project site, regulated areas, materials, and equipment.

**3.32 Liquids – Corrosive acids and Caustics**

- A. Prime Contractor shall not store, handle, apply or use acids or caustics until a proper procedure, per OSHA standards, has been established.
- B. Never add water to acid – if dilution is needed, add acid to water.
- C. Prime Contractor using acids or caustic materials shall have an emergency eyewash and/or shower facility immediately available to personnel working with these types of materials.
- D. Proper personal protection must include a face shield, apron, and gloves as well as any other equipment deemed necessary by the SDS or manufacturer’s usage instruction.

**3.33 Lockout/Tagout (LOTO)**

- A. The Prime Contractor must have a written Lockout/Tagout (LOTO) program for the control of hazardous energy that meets or exceeds the Cal/OSHA Standards and a copy submitted to the Construction Manager.
- B. Equipment, energized systems, and pressurized systems shall be completely de-energized before beginning the Lockout/Tagout procedure and subsequent cleaning, servicing, or adjusting.
- C. Moveable parts shall be mechanically blocked or locked out prior to cleaning, servicing, or adjusting operations.
- D. Equipment that has lockable controls or that is readily adaptable to lockable controls shall be locked out or positively sealed in the “off” position.
- E. Accident prevention signs or tags shall be placed on the controls of equipment, machines, and prime movers during repair work.
- F. All prime contractors must affix their own lock/tag.
- G. Locks and tags must be removed at the end of the job by the originator. Never remove another person’s tag or lock to operate a switch, valve, or device.

**3.34 Motor Vehicles**

- A. Those driving project site motor vehicles shall have a valid driver’s license for the state in which he or she resides and for the class vehicle driven.
- B. Drivers of vehicles over 26,000 pounds GVW are required by Federal and State Departments of Transportation regulations to possess a Commercial Driver’s License (CDL).
- C. Drivers must be specifically trained to operate the mobile equipment they intend to use. Training records must be available at the project site for review.
- D. Drivers on the project site shall obey all street and highway speed and traffic laws.
- E. Drivers shall check the mechanical condition of their vehicles at least daily.

- F. Only if necessary, will a motor vehicle be left running and operator must maintain constant visual contact within 25 feet of the vehicle.
- G. Drivers are required to observe the "right-of-way" rule. Yield to other drivers whose driving actions demand the right-of-way.
- H. Drive defensively. Anticipate what the other driver may do. Leave yourself an out.
- I. Drivers shall keep a distance of AT LEAST one vehicle length for each 10 miles of speed between their vehicle and the vehicle in front of them.
- J. Seat belts shall be worn anytime when driving or riding in project vehicle.
- K. Block or chock vehicle wheels when parking on inclines.
- L. All passengers in motor vehicles must be seated and within the confines of the vehicle.
- M. No one is permitted to ride in the open bed of a pick-up truck.
- N. Unauthorized passengers shall not be transported in any vehicle or on any equipment at any time.
- O. The project site speed limit is 5 mph. Obey all traffic signs.
- P. Pedestrians have the right-of-way.
- Q. Parking shall be in specified areas only. Do not block entrances and do not park in reserved spaces.
- R. The Prime Contractor is responsible for the stability of any material being hauled.

### **3.35 Overhead Utilities**

- A. Prime Contractor shall identify all overhead utilities prior to the start of any work.
- B. For power lines rated 50kV or less, minimum clearance around the lines is 10 feet.
- C. For power lines rated over 50kV, minimum clearance around the lines shall be at least 20 feet. If 20 feet is not achievable, the Prime Contractor will schedule a formal meeting with Construction Manager to review clearance tables, de-energize power, and other alternatives.

### **3.36 Pile Driving**

- A. Prime Contractor will designate a danger zone that will clearly delineate around the operating hammer where personnel involved in cutting, chipping or welding operations shall be prohibited so as to protect them from the hazards of falling objects.
- B. The danger zone shall be maintained under the supervision of a Competent Person.
- C. A blocking device or other effective means capable of safely supporting the weight of the hammer shall be provided to secure the hammer in the leads and shall be used at all times when any personnel is working under the hammer.
- D. Access to Pile Leads
  - 1. Leads shall be provided with a continuous ladder or horizontal bracing that is uniformly spaced at intervals no greater than 18 inches and the leads shall be equipped with adequate anchorages, so that personnel may engage a personal fall protection system to the leads.

2. The operator of the equipment will apply all brakes and necessary safety switches to prevent uncontrolled motion of the equipment before personnel may access the leads.
- E. Sheet pile access
  1. If personnel are required to go aloft on sheet piling, personnel shall use an aerial device or ladder.
  2. Sheet piling shall be firmly stabilized before personnel are permitted to work on them.
  3. Stirrups shall be provided for use by personnel who must take a position on sheet piles.
- F. Where work is to be performed, walkways at least 20 inches in width shall be provided across piles or other open work with the exception of those piles on which the driver is standing.
- G. Before any type of pile is placed in position for driving, the pile head must be cut square to the driving head and free of concrete spall, steel fragments, or other debris.
- H. Pile hammer requirements
  1. The pile hammer, clamp, power unit and supply hoses shall be inspected in accordance with their manufacturer's recommendations. Associated equipment such as the couplings, support and lifting equipment, rigging and retaining bolts shall be inspected before each shift and periodically during use.
  2. Driving heads shall be kept aligned with the pile and pile hammer as a pile is driven
- I. Vibratory pile hammer
  1. When driving with a crane-suspended vibratory pile hammer, the person operating the remote on/off clamp switch shall be in direct visual contact with the signal person.
- J. Pile Driving Rig Stability.
  1. Guys, outriggers, thrustouts, or counter-balances shall be provided as necessary to maintain stability of pile driver rigs.
  2. Hammers shall be lowered to the bottom of the leads while the pile driver is being moved (traveling).
  3. All personnel shall be kept clear when piling is being hoisted into the leads.
- K. When driving jacked piles, all access pits shall be provided with ladders and bulk-headed curbs to prevent material from falling into the pit.
- L. Hoisting of piling shall be done by hooks provided with a means to prevent accidental disengagement or a shackle shall be used in place of a hook.
- M. Taglines shall be used for controlling unguided piles and free hanging (flying) hammers.

### **3.37 Powder-Actuated Tools**

- A. Only trained and Qualified personnel holding a valid operator's card can use a powder-actuated tool.
- B. Powder-actuated tools must meet or exceed the requirements of ANSI A10-3.1977.
- C. Containers for powder-actuated tools must be lockable and bear the label 'Powder-Actuated Tool' on the outside. The container must be kept under lock and key storage.
- D. The following must be provided with each tool:
  1. Operating and service manuals.
  2. Power load chart.
  3. Inspection-Service record.
  4. Repair and servicing tools.

- F. Tools must be inspected prior to use. Defective tools must not be used.
- G. Powder-actuated tools must be unloaded if work is interrupted. Tools must not be loaded until ready for use.
- H. Powder-actuated tools must not be left unattended.
- I. On misfire, the tool must be held in place for 30 seconds.
- J. Misfire shall be placed in a designated can of water. Used and misfired cartridges shall be properly disposed.
- K. Different power loads must be kept in separate compartments.
- L. Warning signs must be posted bearing the words: "Powder-Actuated tools in use" within 50 feet of the point of use.

**3.38 Precast, Pre-Fabricated Concrete Construction, Tilt-up, Panels**

- A. An erection plan, addenda, and procedure shall be prepared by or under the direction of a professional engineer registered in California.
- B. The erection plan, addenda, and procedures shall be available at the jobsite and submitted to the Construction Manager.
- C. Inspections shall be made by the professional engineer, or authorized representative, during the course of erection.
- D. Proposed field modifications shall be approved by the professional engineer.
- E. No personnel shall be directly under the load
- F. Only personnel essential to the operation are permitted in the fall zone (but not directly under the load).
- G. Wall panels shall be supported to prevent overturning, toppling and/or collapse until permanent connections are completed as specified in the erection plan
- H. Panels shall be properly braced to resist wind and lateral forces.

**3.39 Respiratory Protection**

- A. Prime Contractor shall prepare a written Respiratory Protection Program for protection of those who will be wearing a respirator and submit a copy to the Construction Manager.

**3.40 Scaffold**

- A. Prime Contractor shall have a written program addressing scaffold procedures for safe erection, use and dismantling of scaffold system.
- B. Scaffolds shall be erected, moved, or dismantled or altered only under the supervision and direction of a Competent Person qualified in scaffold erection, moving, dismantling or alteration.
- C. Prime Contractor's designated Competent Person shall:
  - 1. Determine the feasibility and safety of providing fall protection for personnel erecting or dismantling supported scaffolds. Fall protection is required for personnel erecting or dismantling supported

- scaffolds where the installation and use of such protection is feasible and does not create a greater hazard.
2. Inspect their scaffold prior to use each day.
  3. Have at each access point (e.g. ladder, stair tower), a “green” inspection tag. This tag shall also be signed by the Competent Person daily, prior to use, as verification of their inspection.
- D. Personnel involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold shall be trained by a Qualified Person to recognize any hazards associated with the work in question. The training shall include the following topics, as applicable:
1. The nature of any electrical hazards, fall hazards, and falling object hazards in the work area.
  2. The correct procedures for dealing with electrical hazards.
  3. The correct procedures for erecting, maintaining, and dismantling the fall protection and falling object protection systems being used.
  4. The proper use of the scaffold, including the proper handling of materials on the scaffold.
  5. The maximum intended load and the load-carrying capacities of the scaffold.
  6. Any other pertinent procedures or safety requirements.
- E. Handrails, midrails and toe boards (as necessary) are required on all scaffold over six (6) feet high. If the guardrail system is incomplete or missing, personal fall protection is required.
- F. Untagged scaffolds shall not be used.
- G. Scaffolding material must not be damaged and planks must be free of defects, damage or debris. Painted planks will not be permitted.
- H. Scaffold planks must be laid tight and secured to prevent movement. Planks must overlap between 6 and 12 inches over the scaffold supports.
- I. A stair-tower or built-in stair/ladder system shall be provided for access to all scaffolds four (4) frames or more in height.
- J. Personnel may ride on rolling scaffold moved by others below if the following exist:
1. The floor or surface is within 3 degrees of level, and free from pits holes, or obstructions.
  2. The minimum dimensions of the scaffold base, when ready for rolling, is at least ½ of the height. Outriggers, if used, shall be installed on both sides of staging.
  3. The wheels are equipped with rubber or similar resilient tires.
  4. The manual force used to move the scaffold shall be applied as close to the base as practical, but not more than 5 feet (1.5 meters) above the supporting surface of the scaffold.
  5. Before a scaffold is moved, personnel on the scaffold shall be made aware of the move.
  6. No one shall be on any part of the scaffold which extends outward beyond the wheels, casters, or other support.
- K. No surfing or self-propelling mobile scaffolding will be permitted without a submitted Prime Contractor’s “surfing scaffold” program.
- L. Wheels must be locked on rolling scaffolds before use.
- M. All connections, including casters, on rolling scaffolds shall be pinned.
- N. Scaffolds must be erected level on a firm base. When the scaffold is resting on earth or other such material, the uprights shall rest on and be secured to the equivalent of a 2-inch by 10-inch by 10-inch (2” x 10” x 10”) wood base. Base plate shall be nailed in accordance with CAL/OSHA standards.
- O. The Prime Contractor must keep the platform load within the safe platform work load limit.

- P. In the event the height-to-base ratio exceeds 3:1, the system must be secured to the structure. The system shall be tied at the ends and inside of the system at 26ft vertical intervals and 30ft horizontal intervals. The top work level shall be tied.
  - 1. Exception: When the frame width is 3ft wide, tie off is at 20ft vertical intervals.
- Q. Ties should provide tension, as well as compression and sway support
  - 1. Use no less than #12 wire, double looped or #10 wire, single wrapped.
- R. Suspended scaffolds that are in service shall be inspected by a Competent Person daily and tested as frequently as is necessary in order to provide proper maintenance.
- S. Suspended scaffolds must have adequate anchorage points. Those on the scaffold shall have a full body harness, lifeline and deceleration device that must be attached to a separate anchorage point other than that of the scaffold before stepping out onto any suspended scaffold.

### **3.41 Silica and Dust Exposure Protection**

- A. Prime Contractor shall submit to Construction Manager a written Respirable Crystalline Silica Program.
- B. Prime Contractor shall fully and properly implement the engineering controls (e.g. integrated water delivery system that supplies water to cutting surface, or commercially available shroud or cowling with HEPA-filter dust collection system), work practices, and respiratory protection to reduce and maintain exposure to respirable crystalline silica and/or dust to or below the PEL.
- C. During operations in which hand tools, powered tools or equipment are used to cut, core, chip, drill, grind, profile, or sand and creates respirable crystalline silica and/or dust; a dust reduction system shall be applied to effectively reduce those particulates.
- D. Procedures shall be implemented to ensure that dust reduction systems maintain their effectiveness for dust reduction throughout the work shift.
- E. Dust reduction systems shall be installed, operated, and maintained in accordance with manufacturer's recommendations.
- F. Dry sweeping or dry brushing where such activities could contribute to exposure to respirable crystalline silica is not permitted. Wet sweeping, HEPA-filtered vacuuming or other method(s) to minimize exposure are required.
- G. The Competent Person must make frequent and regular inspections of the project site, materials, and equipment to implement the written exposure control plan.

### **3.42 Steel Erection**

- A. No building, structure, or part thereof, or any temporary support shall be loaded in excess of its design capacity.
- B. Trusses and beams shall be braced laterally and progressively during construction to prevent buckling or overturning.
- C. During placing of structural members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts drawn up wrench tight.

- D. During the installation of decking, the exposed edges of all temporary planked and metal decked floors at the periphery of the building, or at interior openings, such as stairways and elevator shafts shall be protected by a single 3/8-inch minimum diameter wire rope located between 42 and 45 inches above design finish floor height. Mid-rail protection shall be installed at the completion of the installation of decking.
  - 1. Other guardrail protection may be used if equal fall protection is provided.
  - 2. Periphery fall protection intended to be used as a catenary line can be used if it meets Cal/OSHA requirements for fall protection.
- E. Where skeleton steel is being erected, a tightly planked and substantial floor shall be maintained with two (2) stories or 30 feet, whichever is less, below and directly under the portion of each tier of beams on which any work is being performed.
- F. When connecting beams at the periphery or interior of a building or structure where the fall distance is greater than six (6) feet, the Connector shall be provided with and use appropriate personal fall protection equipment in accordance with Cal/OSHA requirements.
  - 1. Connector means a person who, working with hoisting equipment, is placing and connecting beams or other structural members.
- G. When performing work other than connecting, personnel shall be provided and use personal fall protection equipment in accordance with Cal/OSHA requirements where the fall distance is greater than six (6) feet.
- H. Open web steel joists shall not be placed on any structural steel framework unless such framework is safely bolted or welded.
- I. Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.
- J. When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.
- K. Impact wrenches shall be provided with a locking device for retaining the socket.
- L. Connections of equipment used in plumbing-up shall be properly secured.
- M. Turnbuckles shall be secured to prevent unwinding while under stress.
- N. Plumbing-up guys shall be removed only under supervision of a Competent Person.
- O. Work taking place above grade or any surface exposed to protruding reinforcing steel, or other similar objects, shall be protected against the hazard of impalement by the use of guardrails, or approved ANSI certified fall protection system, or protective covers (e.g. rebar caps).

### **3.43 Tar and Melting Pots**

- A. Any melting chamber must be vented and must have a working thermometer.
- B. No melting pots or tar kettles may be located on roof structures. All melting pots must be on the ground outside, and at least 25 feet from any building.
- C. Pipelines shall be adequately braced or supported to prevent collapse.
- D. Pumper pipelines shall be securely fastened at rooftop and shall not be supported by ladders used for access.
- E. Barricades must be provided when hot liquids are present overhead on a roof or upper floor.

- F. Buckets containing hot asphalt or pitch shall not be carried on ladders.
- G. A fire extinguisher shall be kept near each kettle in use. Extinguisher capacity shall be at least:
  - 1. Less than 150 gallon kettle – 8:BC.
  - 2. 150 – 300 gallon kettle – 16:BC.
  - 3. Larger than 350 gallon kettle – 20:BC.
- H. Kettle and tanker pumps shall be provided with a means of stopping the flow of hot asphalt or pitch manually from the rooftop in emergencies.

#### **3.44 Traffic Control, Flagging Operations and Plate Bridging**

- A. Prime Contractor may be required to submit a traffic control plan to the agency having jurisdiction. Plans requiring approval, must be submitted timely as not to impact the schedule. Any plan requiring agency approval or not, shall be forwarded to Construction Manager one (1) week prior to the work activity.
- B. Traffic Control
  - 1. Prime Contractor shall establish work area protection zones necessary to protect personnel and the public when work is performed in areas where pedestrians or vehicles have access.
  - 2. All personnel in work zones shall wear at a minimum Class II reflectorized vest (or jacket) in accordance with the requirements of Cal/MUTCD. Class III vests may be required, refer to Cal/MUTCD.
  - 3. Traffic control shall be established in compliance with California Manual on Uniform Traffic Control Devices (Cal/MUTCD), local traffic control regulations, WATCH Handbook, or other contract-referenced documents/standards.
  - 4. Prime Contractor shall establish Work Area Protection in consideration of the location of the project site, pedestrians and traffic conditions, and the time of day (daylight or dark).
  - 5. Prime Contractor shall ensure adequate protection to passing vehicles on a roadway by providing a Flagger when barricades, signs and signals may be insufficient.
  - 6. When placing or removing Work Area Protection, the Prime Contractor shall:
    - a. Be consistently alert to traffic conditions.
    - b. Face oncoming traffic.
    - c. Wear proper personal protection (e.g. Class II or III reflective vest, hard hat, and safety glasses).
  - 7. Place the initial warning signs (e.g. Construction ahead) first and remove last.
  - 8. Work zone site must be made safe for pedestrians by using:
    - a. Rope or vinyl warning tape.
    - b. Fencing or other barricades.
    - c. Cones and signs.
    - d. Pedestrian crossings (designated and painted).
    - e. Other appropriate means, methods and devices.
  - 9. All night work requires adequate illumination to light the work area and warn the public vehicular traffic.
  - 10. For night work, the illumination used to light the work area shall be aimed such that it does not create glare for, or blind, the public driving through the work zone.
- C. Flagging Operations
  - 1. Shall be conducted in accordance with the following unless a more specific standard applies.
    - a. Flaggers shall be trained in the proper fundamentals of flagging (signaling) traffic before being assigned as Flaggers.
    - b. The Flagger must be protected and the motorist forewarned by use of advance warning signs and cones.
    - c. Use cones before the Flaggers position to mark the traffic lane.
    - d. The use of reflective vests (minimum Class II) shall be required for all Flaggers.

- e. During the hours of darkness, the Flagger's position shall be illuminated.
  - f. To 'Stop' traffic – The Flagger shall face traffic and hold the stop paddle in a vertical position at arm's length.
  - g. When it is safe for traffic to proceed – The Flagger shall stand parallel to the traffic movement, and with the slow paddle held in a vertical position at arm length.
- D. Plate Bridging
- 1. Trenches, excavations, or other surface openings or significant depressions must be covered with a bridge plate to permit safe and unobstructed flow of traffic.
  - 2. Bridging plates must be secured from movement by a holding device(s) such as cleats, angles, bolts, and tack welding.
  - 3. Bridging plates should be installed to produce a minimum amount of noise.
  - 4. Bridging plates must extend a minimum of one foot beyond the edges, with pavement materials feathering the edges for a reasonably smooth transition.
  - 5. Advance warning signs shall be posted when steel plates are used in a travel path.

**3.45 Trench and Excavation (see Barricades and Signs for additional information)**

- A. Prime Contractor must identify all shut-off valves or control points for known utilities and ensure they work prior to digging.
- B. Each Prime Contractor shall call authority having jurisdiction (e.g. DIGALERT) to mark utilities.
  - 1. Areas to be excavated are to be scanned and/or traced with equipment that locates underground utilities (e.g. pacometer, magnetometer, x-ray, and ground penetrating radar).
  - 2. Underground locating company shall scan and locate all known below grade utilities by reviewing as-built and onsite utility monuments (e.g. gas and water meters, and electrical sub-stations) that may run within the limits of the project site.
  - 3. Underground locating company shall, at a minimum, sweep 12 feet to either side of the new construction prior to any excavation/trench.
- C. Prime Contractor shall pothole to locate existing utilities and provide as-builts for horizontal and vertical location.
  - 1. Visual verification by means of pot-holing by hand-digging, air excavation or water jet excavation shall occur at approximately 12 foot increments along existing utilities.
  - 2. Prime Contractor must hand expose to the point of no conflict 24" on either side of the underground facility, so you know its exact location before using power equipment.
  - 3. Any damage to existing utilities shall be the responsibility of the Prime Contractor to repair or reroute as necessary to maintain the operation of the system(s).
- D. Prime Contractor shall be responsible for protecting and maintaining all trenches and/or excavations it has created by complying with Cal/OSHA standards.
- E. Prime Contractor shall support and protect all existing site and offsite, above and/or below grade, utilities, improvements, and structures.
- F. Prime Contractor shall provide and maintain appropriate barricades to protect people, vehicles, and equipment from falling into the trench/excavation. Lighted barricades must be provided at night.
  - 1. Any trench/excavation that will remain open overnight will require either one or a combination of the following: railings, temporary fencing around perimeter, delineators and "danger" tape, walkway, bridge, and steel plate, and must be reviewed by Construction Manager prior to the Prime Contractor leaving.
  - 2. Any steel plate (Bridge Plate) or other cover shall be installed in a manner so as to eliminate tripping hazards.

- G. Prime Contractor's Competent Person shall:
  - 1. Determine the soil classification (Type A, B, or C) to determine the appropriate type of protective system required for the excavation.
  - 2. Supervise trenching or excavating operations.
  - 3. Inspect their trench and/or excavation prior to use each day, regardless of the depth.
    - a. Prime Contractor shall have written documentation of their inspection and submit to Construction Manager upon completion of the inspection.
  - 4. Be available at the project site during period of access into all trenches/excavations regardless of the protective systems.
- H. The Prime Contractor's materials for the protection of personnel (e.g. bracing, shoring, shielding, and trench boxes) must be in good condition and of proper dimensions/materials.
- I. Excavation greater than 20 feet in depth must have a professional excavation plan approved by a Registered Professional Engineer (RPE). Reports of engineered excavations by professional engineers shall be submitted to Construction Manager.
- J. Excavated soils, material or equipment are to be kept at least two (2) feet from the edge of the excavation.
- K. Ladders or other safe means of access and egress must be provided by the Prime Contractor when the depth of the trench or excavation are 4 feet or more in depth and spaced within 25 feet of lateral travel.
- L. Walkways or bridges with standard guardrails shall be provided where personnel or equipment are required or permitted to cross over excavations over six (6) feet in depth and wider than 30 inches.
- M. Structural ramps:
  - 1. That are used by personnel as a means of access or egress from excavations shall be designed by a Competent Person.
  - 2. Structural ramps used for access or egress of equipment shall be designed by a Competent Person qualified in structural design and shall be constructed in accordance with the design.
- N. Where pedestrian traffic must be accommodated over excavations, suitable non-skid plates or other suitable material capable of withstanding at least twice the maximum intended load must be provided to serve as a pedestrian runway for safe passage.
  - 1. The edges of the runway shall be tapered to minimize trip hazards. Alternatively, the approach to the runway shall be tapered with a suitable and durable material, or the runway set into the surface, to minimize trip hazards.
- O. Rescue equipment must be provided by the Prime Contractor (e.g. full body harness and lifeline, breathing apparatus, and basket stretcher) when hazardous atmospheric conditions are expected to exist in a trench or excavation. (See Confined Space Entry for additional requirements).

**PART 4 - EXHIBITS**

**4.1 Forms**

- A. Competent Person Designation Form .....Reference Exhibit "C.1"
- B. Job Hazard Analysis (JHA) Form .....Reference Exhibit "C.2"
- C. Pre-Shift Crew Meeting Form.....Reference Exhibit "C.3"
- D. Lift Pick & Critical Lift Plan Form.....Reference Exhibit "C.4"

Exhibit "C.1 – Competent Persons Designation Form

**COMPETENT PERSON DESIGNATION**

An evaluation has determined that the person named below has knowledge of the systems, equipment, conditions and procedures, proper use, inspection, manufacturer's recommendations and instructions, and maintenance for the activities designated below. Consequently, this person has been designated as a: "C" = **Competent Person(s)**, "Q" = **Qualified Person(s)**, "L" = **licensed**, "S" = **Supervisor per Cal/OSHA guidelines** and delegated the responsibility and authority for coordinating activities and operations covered by the designation(s).

<b>COMPANY:</b> _____																	
<b>Name of Designated Competent Person:</b> _____																	
<b>Title of Designated Competent Person:</b> _____																	
<p><b>COMPETENT PERSON DESIGNATION(S):</b> Check all that apply  <small>C = "Competent Person(s)", Q = "Qualified Person(s)", L = "Licensed or S = "Supervisor(s)"</small></p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Asbestos Abatement (C)</td> <td><input type="checkbox"/> Demolition (Q)</td> <td><input type="checkbox"/> Ladders (Q)</td> <td><input type="checkbox"/> Scaffold (C)</td> </tr> <tr> <td><input type="checkbox"/> Burning, Welding &amp; Hot-work (C)</td> <td><input type="checkbox"/> Electrician (Live Circuit) (Q)</td> <td><input type="checkbox"/> Lead Abatement (S)</td> <td><input type="checkbox"/> Silica &amp; Dust (C)</td> </tr> <tr> <td><input type="checkbox"/> Confined Space (C)</td> <td><input type="checkbox"/> Explosives (L)</td> <td><input type="checkbox"/> Pile Driving (C)</td> <td><input type="checkbox"/> Steel Erection (C)</td> </tr> <tr> <td><input type="checkbox"/> Cranes &amp; Rigging (Q)</td> <td><input type="checkbox"/> Fall Protection (C &amp; Q)</td> <td><input type="checkbox"/> Powder Actuated Tool (Q)</td> <td><input type="checkbox"/> Trench/Excavation (C)</td> </tr> </table>		<input type="checkbox"/> Asbestos Abatement (C)	<input type="checkbox"/> Demolition (Q)	<input type="checkbox"/> Ladders (Q)	<input type="checkbox"/> Scaffold (C)	<input type="checkbox"/> Burning, Welding & Hot-work (C)	<input type="checkbox"/> Electrician (Live Circuit) (Q)	<input type="checkbox"/> Lead Abatement (S)	<input type="checkbox"/> Silica & Dust (C)	<input type="checkbox"/> Confined Space (C)	<input type="checkbox"/> Explosives (L)	<input type="checkbox"/> Pile Driving (C)	<input type="checkbox"/> Steel Erection (C)	<input type="checkbox"/> Cranes & Rigging (Q)	<input type="checkbox"/> Fall Protection (C & Q)	<input type="checkbox"/> Powder Actuated Tool (Q)	<input type="checkbox"/> Trench/Excavation (C)
<input type="checkbox"/> Asbestos Abatement (C)	<input type="checkbox"/> Demolition (Q)	<input type="checkbox"/> Ladders (Q)	<input type="checkbox"/> Scaffold (C)														
<input type="checkbox"/> Burning, Welding & Hot-work (C)	<input type="checkbox"/> Electrician (Live Circuit) (Q)	<input type="checkbox"/> Lead Abatement (S)	<input type="checkbox"/> Silica & Dust (C)														
<input type="checkbox"/> Confined Space (C)	<input type="checkbox"/> Explosives (L)	<input type="checkbox"/> Pile Driving (C)	<input type="checkbox"/> Steel Erection (C)														
<input type="checkbox"/> Cranes & Rigging (Q)	<input type="checkbox"/> Fall Protection (C & Q)	<input type="checkbox"/> Powder Actuated Tool (Q)	<input type="checkbox"/> Trench/Excavation (C)														
<p><b>REVIEW AND VERIFY THE CREDENTIALS FOR DESIGNATED COMPETENT PERSON – Check all that apply</b></p> <p><b>(Company Authorized Representative to complete):</b></p> <p><input type="checkbox"/> Formal Training (describe the training received and attach copy of training certificate(s), and the year training was completed): _____</p> <p><input type="checkbox"/> Union Apprenticeship (describe the training received and attach copy of training certificate(s), and the year training was completed): _____</p> <p><input type="checkbox"/> Years of Experience (describe how this experience has enabled this person to be considered "Competent Person", and provide the number of years): _____</p> <p><input type="checkbox"/> Informal Training (describe the training, and when this training was conducted): _____</p> <p><input type="checkbox"/> On-The-Job Performance (OJT): (describe how OJT has enabled this person to be considered "Competent Person", and provide the number of years): _____</p>																	
<p><b>SIGNATURES:</b></p> <p><b>Competent Person:</b> _____ <b>Date:</b> _____</p> <p><b>Company Authorized Representative:</b> _____ <b>Date:</b> _____</p> <p><b>Title of Company Authorized Representative:</b> _____</p>																	





Exhibit "C.4" – Lift Pick & Critical Lift Plan Form  
1 of 3



## Lift Pick & Critical Lift Plan

GENERAL INFORMATION		
Date of lift:	Project Name:	Lift Location:
Contractor Name:		
Crane Company Name:		
Person responsible for plan & contact info:		
Crane Operator:	Signal Person:	
Crane Rigger:	Crane inspected by:	
Crane Oiler:	Rigging inspected by:	
Designated Lift Leader:	Other:	
CRANE INFORMATION		
Make:	Model:	S/N:
Date of Manufacture:	Size (Capacity in tons):	
Type of crane: <input type="checkbox"/> Hydraulic <input type="checkbox"/> Friction <input type="checkbox"/> Lattice <input type="checkbox"/> Truck <input type="checkbox"/> Rough Terrain <input type="checkbox"/> Crawler		
LOAD		
Description of load(s):		
Weight of max load (provide manufacturers product data sheets and/or calculations):		
Location of load center of gravity (provide manufacturers product data sheet and/or sketch):		
How will the load center of gravity be <u>determined</u> :		
Will any load be upended? If so, provide stability evaluation from manufacturer or professional engineer:		
RIGGING INFORMATION		
List rigging components – be specific: manufacturer, description, size, length, capacity, and weight:		
CRANE LOCATION & CLEARANCE		
Provide a to-scale plot plan showing crane location, adjacent buildings, pipe racks, and other significant obstructions within load swing radius. Indicate direction and span of swing.		
Provide a to-scale elevation depicting crane, adjacent structures, and load.		
What is the horizontal distance from the crane center pin to the nearest structure?		
What is the minimum clearance from boom to highest point of structure during a pick?		

Rev 2.15.2016

Exhibit "C.4" – Lift Pick & Critical Lift Plan Form  
2 of 3

### Lift Pick & Critical Lift Plan

What is the minimum clearance from load to highest point of structure during a pick?		
What is the minimum distance from boom to load during a pick?		
Will the load or any part of the crane be over any active piping, tanking, or equipment during a pick? Please explain:		
Have underground site utilities been identified and located?		
<b>SET-UP</b>		
Boom angle (degrees):	Distance from Pin (in feet):	
Crane Capacity at set-up configuration (pounds or tons):	Load including rigging is what percentage (%) of rated crane capacity:	
Maximum vertical boom elevation (including erected jib) in feet:	If vertical boom elevation exceeds 200' above existing site elevation, provide FAA permit number:	
<b>EQUIPMENT and LIFT RELATIONSHIP</b>		
Maximum operating radius (feet):	Planned operating radius (feet):	
Allowable load per load chart (in pounds or tons):	Ratio of lift to allowable load (%):	
Clearance between boom and load (feet and inches):	Clearance to existing facilities (feet):	Clearance to energized power lines (feet):
<b>GROUND STABILITY</b>		
Surface Type: <input type="checkbox"/> Bare ground <input type="checkbox"/> Asphalt <input type="checkbox"/> Concrete	Additional Comments:	
Type of support used: <input type="checkbox"/> Mat <input type="checkbox"/> Cribbing	<i>Note: Mats or cribbing will be used on all surfaces</i>	
Will outriggers be located over underground utilities? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, explain protective measures to be taken:		
How will outriggers be configured? <input type="checkbox"/> Fully extended <input type="checkbox"/> Intermediate and Pinned <input type="checkbox"/> Fully retracted		
<b>WEATHER</b>		
Lift will not proceed if wind exceeds (MPH):	Precipitation type: <input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/> Ice <input type="checkbox"/> None	
Cloud type: <input type="checkbox"/> Overcast <input type="checkbox"/> Clear	Lift conducted: <input type="checkbox"/> During daylight <input type="checkbox"/> With artificial light	
<b>LIFT AREA RESTRICTIONS</b>		
Area Barricaded: <input type="checkbox"/> Yes <input type="checkbox"/> No	Equipment swing radius barricaded: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Warning signs required: <input type="checkbox"/> Yes <input type="checkbox"/> No	Unnecessary personnel removed from area: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Will max working radius of boom be within 20' of an overhead power line: <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>If yes, attach JHA outlining how contact hazard will be mitigated.</i>	

Rev 2.15.2016

Exhibit "C.4" – Lift Pick & Critical Lift Plan Form  
3 of 3

### Lift Pick & Critical Lift Plan

COMMUNICATION	
Operator view is unobstructed (pick to set): <input type="checkbox"/> Yes <input type="checkbox"/> No	Communication used: <input type="checkbox"/> Hand signals <input type="checkbox"/> Radio <input type="checkbox"/> Other: Explain other:
PRE-LIFT SAFETY MEETING	
Type of lift: <input type="checkbox"/> Load exceeds 75% of load chart capacity for lifting equipment (Critical Pick) <input type="checkbox"/> Two or more cranes / booms required to lift <input type="checkbox"/> Specialized hoisting rigging equipment used <input type="checkbox"/> Load suspended or moved over loaded lined <input type="checkbox"/> Other (Specify)	
Items discussed:	
<b>Non-compliance with any part of this Crane Lift Plan will be grounds for immediate cessation of work along with corrective action which could lead to permanent removal from the site.</b>	
<b>Contractor, Rigger and Crane Operator are responsible for the accuracy of all calculations and inspections. Any review conducted by Tilden-Coil is to ensure completion of form only.</b>	

#### SIGNATURES

Crane Company  
Responsible Person: \_\_\_\_\_

Print Name	Signature	Date
------------	-----------	------

Contractor  
Responsible Person: \_\_\_\_\_

Print Name	Signature	Date
------------	-----------	------

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## SECTION 01 45 00 - QUALITY CONTROL

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References.
- C. Field samples.
- D. Mock-up.
- E. Project Inspector.
- F. Verified Reports.
- G. Manufacturers' field services and reports.

#### 1.2 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.
- B. Comply fully with manufacturers' instructions including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from ARCHITECT before proceeding.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Where experience minimums for workmen, applicators, companies, or manufacturers are required in individual sections, written certification and documentation substantiating such minimums shall be submitted and approved by the ARCHITECT, when requested.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

#### 1.3 REFERENCES

- A. Conform to reference standard by date of issue current on date of Contract Documents.
- B. Obtain copies of standards when required by Contract Documents.
- C. Should specified reference standards conflict with Contract Documents, request clarification from the ARCHITECT before proceeding.
- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any referenced document.

#### 1.4 FIELD SAMPLES

- A. Install field samples at the site as required by individual specifications Sections for review by ARCHITECT.
- B. Accepted samples represent a quality level for the Work.
- C. Where field sample is specified in individual sections to be removed, clear area after field sample has been accepted by ARCHITECT and is no longer required for reference.

#### 1.5 MOCK-UP

- A. Tests will be performed under provisions identified in this section.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Where mock-up is specified in individual sections to be removed, clear area after mock-up has been accepted by ARCHITECT and is no longer required for reference.

#### 1.6 PROJECT INSPECTOR

- A. An Inspector, herein referred to as the "Project Inspector" or "Job Inspector", will be employed by the DISTRICT and approved by Office of Regulation Services, Division of State Architect ("ORS/DSA") in accordance with Part 1, Title 24, Section 4-333, California Code of Regulations. His duties are described in Part 1, Title 24, Section 4-342, CCR. His duties are also required and defined in Sections 17309, 17311, 81141, and 81143 of the California Education Code as they relate to schools.
- B. The work of construction in all stages of progress shall be subject to the personal continuous observation of the Project Inspector. He shall have free access to any or all part of the work at any time. The CONTRACTOR shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve the CONTRACTOR from any obligation to fulfill this Contract.

#### 1.7 VERIFIED REPORTS

- A. CONTRACTOR shall comply with Part 1, Title 24, Sections 4-336 and 4-343, California Code of Regulations. Issue verified reports through the DSA "Box" as required.

#### 1.8 MANUFACTURERS' FIELD SERVICES AND REPORTS

- B. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start- up of equipment, test, adjust and balance of equipment and as applicable and to initiate instructions when necessary.

**SECTION 01 45 00  
QUALITY CONTROL**

- C. Manufacturers' Representatives shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Submit report of observation to ARCHITECT for review.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 EXECUTION**

NOT USED

**END OF SECTION**



SECTION 01 45 29 TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Selection and payment.
- B. Laboratory responsibilities.
- C. Laboratory reports.
- D. Limits on testing laboratory authority.
- E. CONTRACTOR responsibilities.
- F. Schedule of inspections and tests.
- G. Expansion anchors and powder actuated fasteners.
- H. DSA-103 Form

1.2 REGULATORY REQUIREMENTS

- A. Part 1, Title 24, Section 4-335, California Code of Regulations: Testing required by the Office of Regulation Services, Division of the State Architect ("DSA").
- B. Part 2, Title 24, California Code of Regulations (2016 CBC) Inspections, testing and approvals required by individual sections therein.
- C. Construction Oversight Process Procedure required by the California Code of Regulations, Title 24, and as further described in the DSA's PR 13-01, and 13- 02.

1.3 SELECTION AND PAYMENT

- A. DISTRICT will employ and pay for services of an independent Testing Laboratory approved by the ARCHITECT and DSA to perform inspection and testing in accordance with Part 1, Title 24, Section 4-335, California Code of Regulations.
  - 1. In accordance with SB732 dated July 1, 1992, when hazardous materials abatement measures are included in the work, DISTRICT will employ and pay for the services of an independent testing laboratory, licensed and certified by the State, to conduct clearance and air sampling tests.
- B. Testing Laboratory shall forward all billings and records of such costs to the DISTRICT for approval. Such costs, if determined by the DISTRICT to be attributable to the CONTRACTOR under this provision, will be deducted from CONTRACTOR'S final payment (or any funds due and payable) by change order.
- C. When tests and inspections are required on an overtime basis, initial payment will be made by DISTRICT. At termination of work or completion of project, all costs for overtime testing and inspections will be deducted from CONTRACTOR'S final payment (or any funds due and payable) by change order.

- D. Before Testing Laboratory file testing and inspection billings with DISTRICT, they shall be so billed to segregate straight time from overtime costs and all overtime costs are to be substantiated with a detailed explanation for necessity of such work costs.
- E. When materials tested fail to meet requirements herein specified, they shall be promptly corrected or removed and replaced and retested in a manner required by the ARCHITECT. Costs involved in re-testing will be paid by the DISTRICT and deducted from CONTRACTOR'S final payment (or any funds due and payable) by change order.
- F. Employment of testing laboratory shall in no way relieve CONTRACTOR of obligation to perform work in accordance with requirements of Contract Documents.

#### 1.4 LABORATORY RESPONSIBILITIES

- A. Laboratory shall be licensed to conduct testing and inspection operations in California. It shall be supervised by a State Licensed Civil Engineer who shall certify and sign all reports.
- B. Provide qualified personnel at site. Cooperate with ARCHITECT, Project Inspector and CONTRACTOR in performance of services.
- C. Perform specified inspection, sampling, and testing of Products in accordance with standards specified herein.
- D. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- E. Promptly notify ARCHITECT, Project Inspector, and CONTRACTOR by letter of observed irregularities or non-conformance of Work or Products.
- F. Perform additional inspections and tests required by ARCHITECT or Governing Agencies.
- G. Immediately upon Testing Laboratory determination of a test failure, the laboratory shall telephone the results of test to ARCHITECT. On the same day, laboratory shall send written test results to those named on the distribution list below.

#### 1.5 LABORATORY REPORTS

- A. After each inspection and test, promptly submit one (1) copy of laboratory report to the following:
  - 1. DISTRICT.
  - 2. CONSTRUCTION MANAGER.
  - 3. Project Inspector.
  - 4. ARCHITECT.
  - 5. Structural Engineer.
  - 6. Mechanical and Electrical Engineers (Related Tests and Inspections).
  - 7. DSA.

- B. Include:
1. Date issued.
  2. Project title, ARCHITECT'S number, DSA application and file number.
  3. Name of Inspector.
  4. Date and time of sampling or inspection.
  5. Identification of product and Specifications Section.
  6. Location in the Project.
  7. Type of inspection or test.
  8. Date of test and ambient conditions at time of test.
  9. Results of tests.
  10. Conformance with Contract Documents.
  11. Signature by Registered Professional Engineer licensed in California.
  12. Statement that tests were conducted in accordance with Parts 1 and 2, Title 24, California Code of Regulations.
- C. Test reports shall include tests made, whether such tests indicate that the material performed satisfactorily or not. Samples taken but not tested shall be reported. Reports shall show that the materials were sampled and tested in accordance with the requirements of the approved specifications. Reports shall show the specified design strength and shall state whether or not the materials tested comply with requirements. Report special sampling operations where required.
- D. Submit a report verifying that tests and inspections herein specified and otherwise required have been completed and material and workmanship complies with the contract documents. Such verification reports shall be submitted at the completion of the project and at any time the project is suspended. Parties to receive such reports are the same as listed above.
- E. When requested by ARCHITECT, provide interpretation of test results.

#### 1.6 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of the Work.
- C. Laboratory may not assume any duties of CONTRACTOR.
- D. Laboratory has no authority to stop the Work.

**1.7 CONTRACTOR RESPONSIBILITIES**

- A. Deliver to laboratory at designated location, adequate samples of materials proposed to be used which require testing.
- B. Cooperate with laboratory personnel, DISTRICT'S Representative, Project Inspector, CONSTRUCTION MANAGER, and the ARCHITECT and provide access to the Work including weekends and after work hours and to manufacturer's facilities.
- C. Provide incidental labor materials and facilities to provide at all times, safe access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test samples.
- D. Notify CONSTRUCTION MANAGER, Project Inspector and laboratory 48 hours prior to expected time for operations requiring inspection and testing services. Also, notify DISTRICT in advance of manufacturer of materials to allow testing at source of supply.
- E. The DISTRICT, Project Inspector, CONSTRUCTION MANAGER, or the ARCHITECT shall have the right to reject materials and workmanship which are defective or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without cost to the DISTRICT. If the CONTRACTOR fails to correct such rejected work within a reasonable time, fixed by written notice, the DISTRICT will correct same and charge the expense to the CONTRACTOR by change order.
- F. Should it be considered necessary or advisable by the DISTRICT at any time before date of substantial completion of the entire work to make an examination of work already completed by removing or tearing out the same, the CONTRACTOR shall on request promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any respect due to fault of the CONTRACTOR or his subcontractor, all extra expenses shall be charged to the CONTRACTOR by change order. If, however, such work is found to meet the requirements of the Contract, the additional cost of labor and material necessarily involved in the examination and replacement costs shall be allowed the CONTRACTOR by change order.
- G. When changes of construction schedule are necessary during construction, coordinate such changes with the Testing Laboratory as required.
- H. When the testing laboratory is ready to test according to the established schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, extra charges for testing attributable to the delay shall be charged to the CONTRACTOR by change order.
- I. Inspecting and testing performed exclusively for the CONTRACTOR'S convenience shall be the sole responsibility of the CONTRACTOR.
- J. Selection of materials to be tested shall be made by the testing laboratory or the Project Inspector and not by the CONTRACTOR.

**1.8 SCHEDULE OF STRUCTURAL TEST AND INSPECTIONS (FORM DSA-103) (2016 CALIFORNIA BUILDING CODE REFERENCED)**

- A. MASONRY - CBC CHAPTER 21A
  - 1. Materials:

- a. Masonry Units - 2103A.1, ASTM C90, sampled and tested using ASTM C140 and CBC-17, 1704A.4.1
  - b. Portland Cement - ASTM C150, Type as specified, sampled and tested using CBC- 17, 1704A.4.1
  - c. Lime - ASTM C260, Type as specified, sampled and tested using CBC- 17, 1704A.4.1
  - d. Mortars and Aggregates - 2103A.8, 2103A.12.3, ASTM C144, sampled and tested using CBC-17, 1704A.4.1
  - e. Grouts and Aggregates - 2103A.12, ASTM C404, sampled and tested using CBC-17, 1704A.4.1
  - f. Reinforcing Bars - 2103A.13, ASTM A615, A767, or A775 as required for specified finish, sampled and tested using CBC-17, 1704A.4.1 and fabricated in accordance with CBC-19, Article 1907A
2. Masonry Quality
- a. Mortar Tests - 2105A.2, ASTM C270, Type S, proportion mix, inspected and tested in accordance with CBC- 21A, Article 2103A.8 and CBC- 17A, Article 1704A.5 and itsreferenced Table 2105A.5.3
  - b. Grout Tests - 2105A.2, ASTM C476, Fine and Course Grout, proportion mix, inspected and tested in accordance with CBC-21A, Article 2103A.8 and CBC-17A, Article 1704A.5 and its referenced Table 2105A.5.3
  - c. Masonry Core Tests - 2105A.4
  - d. Masonry Unit Tests - 2105A.2.2.1
  - e. Reinforced Bar Tests - 1916A.2

3. Masonry Inspection
  - a. Reinforcing Bar Welding - ACI 318:3.5.2, as amended by CBC-19, 1903A.7; inspected and tested in accordance with CBC- 17A, Article 1704A.3.1.3, 1704A.3.1.4 and Table 1704A.3, DSA IR 17-3
  - b. Reinforced Masonry - 1704A.5 and Table 1704A.5.3
  - c. Masonry Screen Walls - 2115A.1 (non-bearing)
- B. WOOD - CBC CHAPTER 23
  1. Materials
    - a. Lumber Grading - 2303.1.1
    - b. Plywood Grading - 2303.1.4, 2304.7
    - c. Glue - Laminated Members - 2303.1.3
    - d. Prefabricated I Joists - 2303.1.2
    - e. Timber Connectors - DSA IR 23-1
- C. CONCRETE - CBC CHAPTER 19A
  1. Materials:
    - a. Portland Cement Tests - 1903A.1, ACI 318-08, ASTM C150, inspected and tested in accordance with 1704A.4.1 and 1916A.1
    - b. Concrete Aggregates - 1903A.3, ACI 318-08, ASTM C33, inspected and tested in accordance with 1704A.4.1 and 1916A.1
    - c. Reinforcing Bars - 1903A.4, ASTM A615, A767 or A775 as specified, inspected and tested in accordance with 1704A.4.1 and 1916A.1
    - d. Mix Designs - 1905A.2, A.3, A.4, A.5
    - e. Admixtures - ACI 318, Section 3.6

2. Concrete Quality:
  - a. Proportions of Concrete - 1905A.2, ACI 318
  - b. Strength Tests of Concrete - 1905A.6, 1905A.6.2 - 1905A.6.5, 1916A.1
  - c. Splitting Tensile Tests- 1905A.6.2 - 1905A.6.5
  - d. Slump Tests - 1905A.6
3. Concrete Inspection:
  - a. Jobsite Inspection - 1704A.4 and Table 1704A.4
  - b. Continuous Batch Plant Inspection - 1704A.4.2
  - c. Waiver of Batch Plant - 1704A.4.3
  - d. Pre-Stressed Concrete - 1704A.4.4
  - e. Reinforcing Bar Welding - 1704A.3.1.3 and 1903A.7, 1916A.2
  - f. Construction Joints - 1906A.4, ACI 318

D. STEEL - CBC CHAPTER 22A

1. Materials:
  - a. Structural Steel - 2205A
  - b. Cold Formed Steel - 2209A.1, 2210A
  - c. Material Identification - 2203A.1
  - d. Steel Deck - 2209A
2. Inspection and Tests of Structural Steel:
  - a. Tests of Structural Steel - 2212A
  - b. Inspection of Cold Formed Steel - 1707A.4
  - c. Tests of High Strength, Bolts, Nuts and Washers - 2212A.1
  - d. Tests of End Welded Studs - 2212A.2, 1704A.3.1.1
  - e. Shop Fabrication Inspection - 1704A.2, 1704A.3.2
  - f. Welding Inspection - 1704A.3.1.1

- g. High Strength Bolt Installation Inspection - 1704A.3.3
  - h. Non-Destructive Weld Testing - 1704A3.1.1, AISC 341, AWS D1.1, DSA IR 17-2
- E. ALUMINUM - CBC CHAPTER 20A
- 1. Materials:
    - a. Alloys - 2002.1
    - b. Identification - 2002.1
  - 2. Inspection:
    - a. Welding - 2003.1, 17A
- F. EXCAVATIONS, FOUNDATIONS & RETAINING WALLS - CBC CHAPTERS 18A and 33A
- 1. Earth Fill Compaction: - Appendix J, Section J107
  - 2. Inspections
    - a. Compaction - 1803A.5, 1810A, 3304.1, 1704A.7
    - b. Soils - 1704A.1, 1704A.7
    - c. Caissons/Drilled Piers- 1704A.9
- G. ROOFING AND ROOF STRUCTURES
- 1. Materials:
    - a. Roof Concrete and Clay Tile - 1716A
    - b. Membrane Roofing - Chapter 15
- H. FIRE-RATED DOORS AND FRAMES
- 1. Testing of Smoke and Draft Control Assemblies - CRSC 12-7-4  
CBC Section 715.4
- 1.9 APPROVED EXPANSION ANCHORS**
- A. Wedge Type: KWIK BOLT TZ, 1/4 to 1 inch diameter, ICC No. ESR-1917, by Hilti Corp., Tulsa, OK.
  - B. Sleeve Type: Hilti HSL-3, 1/4 to 3/4 inch diameter, ICC No. ESR-1545, by Hilti Corp., Tulsa OK.

- C. Maximum Values: The maximum allowable shear and tension values shall be determined in one (1) of the following ways;
  - 1. The allowable load values shall be based on the ultimate shear and tension load data from qualification tests, in accordance with ASTM E- 488, of at least five (5) test specimens, using a factor of safety of five (5) on the average of the test values or a factor of safety of four (4) on the lowest test value, whichever is lower, or;
  - 2. An allowable load equal to but not more than eighty percent (80%) of the allowable load listed in the ICC Evaluation Report recommendation for a specific anchor in the same configuration as tested.
- D. Expansion anchors installed in the tension zone (underside) of structural members (beams and slabs) shall have allowable load values modified beyond that defined in D.1 and D.2, unless data is submitted indicating that the specific anchor is not adversely affected by the cracking of concrete in the tension zone. From qualification test per D.1, a factor of safety equal to eight (8) shall be used on those anchors. If loads are determined from an ICC Evaluation Report, the allowable loads shall be based on bolts installed without special inspection.
- E. Embedment, Spacing and Edge Distance: The minimum spacing between anchors shall be as defined in the ICC Report.
- F. All expansion anchors shall meet the minimum depth of embedment criteria established by the ICC Report and/or manufacturer. The minimum slab thickness established in the manufacturer's technical guide for the specified anchor shall also be adhered to.

#### 1.10 REQUIRED TESTING FOR POST INSTALLED ANCHORS IN CONCRETE

- A. When post-installed anchors are used in lieu of cast-in place bolts, the installation verification test loads, frequency and acceptance criteria shall be in accordance with this section. Test loads or torques and acceptance criteria shall be shown on the construction documents.
- B. If any anchor fails testing, all anchors of the same type shall be tested, which are installed by the same trade, not previously tested until twenty (20) consecutive anchors pass, then resume the initial test frequency.
- C. Required test loads shall be determined by one of the following methods:
  - 1. Twice the maximum allowable tension load or one and a quarter (1¼) times the maximum design strength of anchors as provided in International Code Council - Evaluation Service Report ("ICC-ESR") or determined in accordance with Appendix D of ACI 318. Tension test load need not exceed 80 percent of the nominal yield strength of the anchor element ( $=0.8 A_{se}f_y$ ).
  - 2. The manufacturer's recommended installation torque as approved in an ICC-ESR.
- D. When post-installed anchors are used for sill plate bolting applications, ten percent (10%) of the anchors shall be tested. When post-installed anchors are

used for other structural applications all such anchors shall be tested. When post-installed anchors are used for non-structural applications such as equipment anchorage, fifty percent (50%) or alternate bolts in a group, including at least one-half the anchors in each group, shall be tested.

E. The testing of the post-installed anchors shall be done in the presence of the special inspector and a report of the test results shall be submitted to the enforcement agency. Refer to 1916A.7 for exceptions.

F. Acceptance criteria for post-installed anchors shall be based on ICC-ESR or manufacturers written instruction, acceptable to the enforcement agency. Field test shall satisfy following minimum requirements.

1. Hydraulic ram method:

Anchors tested with a hydraulic jack or spring loaded devices shall maintain the test load for a minimum of 15 seconds and shall exhibit no discernable movement during the tension test, e.g., as evidenced by loosening of the washer under the nut.

For adhesive anchors, where other than bond is being tested, the testing device shall not restrict the concrete shear cone type failure mechanism from occurring.

2. Torque wrench method:

Anchors tested with a calibrated torque wrench must attain the specified torque within  $\frac{1}{2}$  turn of the nut.

Exceptions:

a. Wedge or sleeve type: One-quarter ( $\frac{1}{4}$ ) turn of the nut for a  $\frac{3}{8}$  in. sleeve anchor only.

b. Threaded type: One-quarter ( $\frac{1}{4}$ ) turn of the screw after initial seating of the screw head.

G. Test procedure shall be as required by the ICC-ESR. Manufacturer's recommendation for testing may be approved by the enforcement agency, when ICC-ESR does not provide a testing procedure.

#### 1.11 POWDER ACTUATED FASTENERS

A. Use of Powder actuated fasteners for tension loads is limited to support of minor loads such as suspended acoustical ceilings, ductwork and conduit.

B. Allowable Loads: Limited to less than 100 lbs.

C. Permissible Loads:

1. Stone Aggregate Concrete: Minimum 0.177 inch diameter, minimum penetration 1-7/16 inch. Required Allowable Loads: 100 lbs or eighty percent (80%) of values listed in ICC Report whichever is less:

1500 and 1600W SERIES, by ITW Ramset, City of Commerce, CA, ICC No. ESR-1779.

- a. Type DS, by Hilti Fastening Systems, Inc., Tulsa, OK, ICC No. ESR-1663.

2. Lightweight Aggregate Concrete: Minimum 0.145 inch diameter, minimum penetration 1-1/8 inch. Required Allowable Loads: 100 lbs or eighty percent (80%) of values listed in ICC Report whichever is less:

- a. 1500 SERIES, by ITW Ramset, City of Commerce, CA, ICC No. ESR-1799.

#### 1.12 REQUIRED TESTING FOR POWDER ACTUATED FASTENERS

- A. Testing: Operator, tool and fastener shall be pre-qualified by the Project Inspector.
  1. Tools shall conform to ANSI A10.3 safety requirements for Powder Actuated Fastening Systems and to all OSHA requirements.
- B. The Project Inspector shall observe the testing of the first ten (10) fastener installations loaded in tension.
- C. A test pullout load of not less than twice the design load or 200 lbs, whichever is greater, shall be applied to the fastener in such a manner as not to resist the spalling tendency of concrete in which the fastener is imbedded. Thereafter, random tests under the Project Inspector's supervision shall be made of approximately 1 in 10 fasteners. The design load shall not exceed 100 lbs.
- D. Should failure occur on any fastener tested, all installations shall be tested until twenty (20) consecutive fasteners pass, then resume the initial testing frequency.

#### 1.13 INSTALLATION

- A. When installing drilled-in anchors and/or powder driven pins in reinforced concrete, use care and caution to avoid cutting or damaging reinforcing bars. When required by the ARCHITECT, locate the reinforcing by using a non-destructive method prior to installation. Exercise extreme care and caution to avoid cutting or damaging reinforcing during installation. Maintain a minimum clearance of one inch between the reinforcing and the anchor and/or pin.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

Test and Inspection Request Form on next page.

**CM'S NAME**  
**TEST & INSPECTION**

**JOB #**

**Request Form**

**PROJECT NAME**

Date Required \_\_\_\_\_ Specification \_\_\_\_\_

Testing or Special Inspection Requested:

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Specific Location:

(Offsite, site, building name, etc.)

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NOTE: According to Specifications, CONTRACTOR is to notify the CONSTRUCTION MANAGER, IOR or Testing Lab a minimum of 48 hours prior to inspections or testing being required.

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Request made by: Print: \_\_\_\_\_

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

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

Date Received: \_\_\_\_\_ By: \_\_\_\_\_

END OF SECTION

**SECTION 01 50 00 - CONSTRUCTION FACILITIES**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Furnishing and installing required temporary facilities as indicated or specified as required for proper performance of the contract.

**1.2 REGULATORY REQUIREMENTS**

- A. Comply with governing regulations and utility company regulations and recommendations.
- B. Comply with pollution and environmental protection regulations for use of water and energy, for discharge of wastes and storm drainage from Project Site and for control of dust, air pollution, and noise.
- C. Temporary construction shall conform to requirements of State, County and Local authorities and underwriters which pertain to operation, health, safety and fire hazard. CONTRACTOR shall furnish and install items necessary for conformance with such requirements, whether or not called for under the separate divisions of these specifications.

**1.3 TEMPORARY WATER**

- A. Each CONTRACTOR shall provide construction water at the closest existing fire hydrant as approved by the local jurisdiction and the CONSTRUCTION MANAGER. CONTRACTOR supplied point of connection shall include applicable temporary meter and backflow devices. CONTRACTORS requiring construction water shall provide all labor and materials (including cut and patch) to distribute.

**1.4 TEMPORARY SANITARY FACILITIES**

- A. The CONSTRUCTION MANAGER shall provide chemical toilets and wash stations for the duration of the project.
- B. Existing facilities shall not be used.

**1.5 FENCES AND BARRICADES**

- A. The CONSTRUCTION MANAGER shall provide six (6) foot high temporary chainlink fence with locked entrance gates to substantially enclose the entire project site. Any activities schedule to commence prior to the installation of fencing will be temporarily fenced by CONTRACTOR requiring same.
- B. The applicable CONTRACTOR requiring same shall construct and maintain planking, barricades, lights and warning signs as indicated as required by Local authorities and State safety ordinances and as necessary for the protection of the public.

**1.6 TEMPORARY TELEPHONE SERVICE**

NOT USED

**1.7 CONSTRUCTION EQUIPMENT**

- A. CONTRACTOR shall erect, equip, and maintain construction equipment in strict accordance with applicable statues, laws, ordinances, and regulations of authority having jurisdiction.
- B. CONTRACTOR shall provide, maintain and move upon completion of the Workall temporary rigging, scaffolding, hoisting equipment, rubbish chutes, ramps, stairs, runways, platforms, ladders, railings, and other temporary construction as required for all work hereunder.
- C. CONTRACTOR shall provide, maintain, and move upon completion all required equipment, lifts, and hoists as required for all the work.

**1.8 STORAGE**

- A. Operations of the CONTRACTOR, including storage of materials, shall be confined to areas approved by CONSTRUCTION MANAGER. CONTRACTOR shall be liable for damage caused by him during such use of property of the DISTRICT or other parties. CONTRACTOR shall save the DISTRICT and CONSTRUCTION MANAGER along with their respective officers, employees and agents, and the ARCHITECT and his employees, free and harmless from liability of any nature or kind arising from any use, trespass or damage occasioned by his operations on premises of third persons. Storage facilities shall provide protection of products from excessive cold, heat, moisture, humidity or physical abuse as specified in the respective sections for the products stored. Each CONTRACTOR requiring same shall provide their own temporary storage and security for same.
- B. Staging areas will be under the supervision of the CONSTRUCTION MANAGER. Materials shall be placed and relocated as necessary for the progress of the project.

**1.9 TEMPORARY JOB OFFICE**

- A. CONSTRUCTION MANAGER shall provide and maintain in good condition, on the site a temporary job office for the CONSTRUCTION MANAGER'S and Inspector's use only. Should any CONTRACTOR require office space, the CONTRACTOR requiring office space shall provide same.

**1.10 TEMPORARY ELECTRICAL**

- A. Electrical CONTRACTOR will provide (3) temporary power distribution boxes (spider boxes).
- B. Any temporary power requirements beyond these provided will be the responsibility of the CONTRACTOR requiring the same.
- C. All welding will be done with self-contained gas powered units.

### 1.11 TEMPORARY LIGHTING

- A. Electrical Prime Contractor shall provide OSHA required minimum lighting but not less than string lights at all corridors and stairwells.
- B. Each CONTRACTOR shall be responsible to provide and maintain all temporary lighting as required to safely access and perform their work.

### 1.12 TEMPORARY HEAT

- A. Temporary heat will be provided and maintained by the CONTRACTOR requiring same.
- B. Do not use permanent equipment for temporary heating purposes unless specifically noted otherwise in the contract documents.
- C. When schedule indicates casework installation before permanent power and HVAC systems are complete, Casework CONTRACTOR shall provide temporary heat/dehumidifier as required.

### 1.13 TEMPORARY VENTILATION

- A. All CONTRACTORS shall ventilate enclosed areas to assist cure of materials, dissipate humidity and to prevent accumulation of dust, fumes, vapors, or gases as the above may be generated by them.

### 1.14 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provided protection for plant life and trees designated to remain and for soft and hardscape areas adjacent to work, replace damaged materials as directed by the ARCHITECT.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.
- E. Construction workers shall not interact or communicate with students or staff except in emergency or safety related situations. (Post a sign to this effect at entry.)

### 1.15 NOISE CONTROL

- A. CONTRACTORS shall ensure that all construction equipment utilized include noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer of such equipment.

- B. CONTRACTORS shall review and be knowledgeable of any CEQA documentation for this project restricting or limiting noise and implement any and all scheduling or mitigation methods necessary to conform with the CEQA documents. This includes any Mitigated Negative or Negative Declaration instrument the DISTRICT has produced.
- C. CONTRACTORS shall review and be knowledgeable of any federal, state or local agency requirements for noise restrictions and adhere to the policies outlined by the applicable laws and codes.

#### 1.16 POLLUTION CONTROL

- A. Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.

#### 1.17 EXTERIOR ENCLOSURES

- A. Provide temporary weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for materials, to allow for temporary heating and maintenance or required ambient temperatures identified in individual specification Sections and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

#### 1.18 ACCESS ROADS

- A. Provide and maintain access to fire hydrants, free of obstructions.
- B. Existing on-site roads may be used for construction traffic.
- C. CONTRACTORS may not park or drive on concrete walks or in the new buildings at any time.

#### 1.19 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.
- B. Each applicable CONTRACTOR shall remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces prior to the space being enclosed.
- C. Each applicable CONTRACTOR shall broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- D. Remove waste materials, debris, and rubbish from site regularly and per requirements of the General Conditions.

#### 1.20 FIRE PROTECTION

- A. Fire protection during construction shall be provided in accordance with CFC, Article 87.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES

- A. Locate and install where directed by the CONSTRUCTION MANAGER and maintain in a safe and sanitary condition at all times until completion of the contract.

END OF SECTION

SECTION 01 50 00  
CONSTRUCTOIN FACILITIES

SECTION 01 56 00 TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Water Control.
- B. Dust Control.
- C. Erosion and Sediment Control.
- D. Noise Control.
- E. Pollution Control.

1.2 WATER CONTROL

- A. Do not permit surface or subsurface water or other liquids to accumulate in or about the premises and vicinity thereof. Should such conditions be encountered or develop, control the water or other liquid and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams or other methods as approved by the ARCHITECT and/or the authority having jurisdiction.

1.3 NOISE CONTROL

- A. Avoid excessive noise where adjacent operations may be detrimentally affected.

1.4 POLLUTION CONTROL

- A. Provide methods, means and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
- B. Burning of refuse, debris, or other materials will not be permitted on the Site.
- C. Comply with regulatory requirements and anti-pollution ordinances during the course of construction and disposal operations.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 REMOVAL

- A. Remove all temporary control measures in accordance with regulatory requirements at the completion of construction.

END OF SECTION

SECTION 01 60 00 MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.

1.2 PRODUCTS

- D. Products: Means new material, machinery, components, equipment, fixtures and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying, and erection of the Work. Products may also include existing materials or components required for reuse.
- E. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- F. Provide interchangeable components of the same manufacturer for similar components.

1.3 TRANSPORTATION AND HANDLING

- G. Transport and handle products in accordance with manufacturer's instructions.
- H. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- I. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 STORAGE AND PROTECTION

- J. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- K. For exterior storage of fabricated products, place on sloped supports, above ground and protect as necessary to prevent deterioration or damage to the product.
- L. When approved by the DISTRICT, provide off-site storage and protection in a bonded warehouse approved by DISTRICT when site does not permit on-site storage or protection at no cost to the DISTRICT.
- M. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- N. Store loose granular materials on solid flat surfaces in a well-drained area.

**SECTION 01 60 00  
MATERIALS AND EQUIPMENT**

Prevent mixing with foreign matter.

- O. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement or damage.
- P. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**

## SECTION 01 64 00 - STORM WATER POLLUTION PREVENTION

### PART I - GENERAL

#### 1.1 SECTION INCLUDES

- A. Installation of Storm Water Pollution Prevention Plan ("SWPPP") measures per plans and specifications for the purpose of preventing the discharge of pollutants from the construction site into the receiving waters.
- B. Compliance with local, state and federal regulations.

#### 1.2 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions
- B. Supplemental Conditions

#### 1.3 REFERENCES

- A. California Storm Water Best Management Practice ("BMP") Handbook for Construction Activity (California Stormwater Quality Association), latest Edition.
- B. Storm Water Resource Control Board ("SWRCB")
- C. National Pollutant Discharge Elimination System ("NPDES")
- D. Storm Water Pollution Prevention Plan ("SWPPP"), attached

#### 1.4 SUBMITTAL REQUIREMENTS

- A. N/A

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Use materials of a class, grade and type needed to meet the performance described in the BMP Handbook.

### PART 3 - EXECUTION

#### 3.1 PREPARATION AND APPROVAL

- A. Use as a guide the BMP Handbook, latest edition, published by the SWRCB.
- B. Install BMP based upon approved SWPPP or modify BMP's based upon field conditions.

- C. Contain on-site storm water at the jobsite. Do not drain on-site water directly into the storm drain.

**PREPARATION AND APPROVAL (by the District's QSD)**

- A. Use as a guide the BMP Handbook, latest edition, published by the SWRCB.
- B. Install BMP based upon approved SWPPP or modify BMP's based upon field conditions.
- C. Contain on-site storm water at the jobsite. Do not drain on-site water directly into the storm drain.

**3.2 IMPLEMENTATION**

- A. Bid Categories identified below are responsible for providing and installing the implementation, maintenance, inspection, reporting, and monitoring the Storm Water Pollution Prevention Plan (SWPPP) for their respective construction phases for the purpose of preventing and eliminating the discharge of pollutants from the construction site throughout the duration of this phase of work. The SWPPP plans will be developed by the owner. Implementation and maintenance of SWPPP to include all materials/equipment identified in the SWPPP Drawings, including, but not limited to the following: dust control, street sweeping, stabilized entrances, sandbags, gravel bags, haybales, wattles, swales, silt fence, plastic sheeting, cleaning of catch basins and piping, etc. as required for maintenance and a complete system in compliance with all Federal, State and Local requirements. The following phases of SWPPP implementation/maintenance periods are tasked to the responsible Bid Categories identified below.

- 1. **All Phases:** All Bid Category Contractors are responsible for maintaining (unless specifically noted otherwise herein) all necessary SWPPP measures applicable to the performance of their bid category scope of work, including but not limited to the following:
  - a. Coordination
    - 1. Are required to have a Qualified SWPPP Practitioner (QSP), as certified by the State, on their company's staff (company as a whole). The QSP cannot be a hired consultant; the QSP must be an employee of the Prime Contractor's staff. This requirement is to further ensure that the responsibilities of storm water pollution prevention are fully understood by each Prime Contractor.
    - 2. The Prime Contractor's QSP is required to attend the construction preparatory conference, coordinated by the Construction Manager at the start of the Project, and be available during the duration of the Project.
  - b. Dust control
    - 1. Provide general dust control except during demolition and mass grading operations, during which time the Prime Contractor performing demolition and grading operations will be responsible for dust control.
  - c. Trash and debris management
    - 1. All trash and debris are to be contained (in containers, cans, bins, etc.) at all times.
    - 2. All containers are to be covered daily as to prevent wind removal of trash

- and debris thus preventing storm water pollution.
3. All containers are to be covered by a waterproof, non-porous, cover and sealed to protect from leakage and storm water pollution at the end of each day and in accordance with new SWRCB regulations.
  - d. Construction material management and storage
    1. All materials must be stored in a manner as to prevent storm water pollution, including but not limited to the following
      - a. Materials shall not have direct contact with the ground.
      - b. Materials shall be covered completely with waterproof covering when not in use.
  - e. Equipment management and storage
    1. All equipment shall be properly stored, contained and protected while on Site.
    2. Heavy machinery and equipment shall be equipped to prevent any dripping, spillage and/or leakage of fluids on site. Properly store and protect equipment at all times.
  - f. Stockpile management
    1. All stockpiled materials must be protected and covered by waterproof covering when not in use.
    2. Stockpiles are not to be placed directly on (e) hardscape to remain without expressed written consent from the Construction Manager.
  - g. Repair and replacement of any and all SWPPP measures relocated, removed, and/or damaged by the performance of a bid category's scope of work. Repair and replacement is to be done immediately.
  - h. Revisions, Additions and Maintenance as required, specific to the performance of each bid category's scope of work.
  - i. Contain on-site storm water at the jobsite. Do not drain on-site water directly into the storm drain.
  - j. Maintenance and cleaning of construction entrance and vehicles as to ensure no soil whatsoever is tracked outside the limits of SWPPP measures in place as approved by the QSP and QSD.
2. **Site Plumbing Utility Installation:** (Site Plumbing Contractor)
    - a. During installation, modify BMPs as required to ensure SWPPP is being maintained.
    - b. Provide grave/sand bags at storm drain inlets. Maintain BMPs until structures have been installed and the adjacent finish work as completed.
    - c. During this phase, provide site watering as often as required daily for dust control.
      1. Include in base bid an additional 20 hours of dust control to be used at the discretion of the Construction Manager.
  3. **Site Hardscape – Concrete Phase:**
    - a. Upon commencement of site hardscape – Concrete Contractor shall implement and maintain all SWPPP measures required to prevent water run off until complete.

- b. Remove SWPPP BMPs in the areas of hardscape – concrete locations.
- c. Site water as often as required daily for dust control.
- B. Additional increased SWPPP measures, not identified upon the SWPPP and required solely by Excessive Rain Events greater than the historical monthly averages, shall be provided immediately as requested by the Construction Manager. The additional measures shall be performed on a Time and Material basis with the tickets acknowledged and verified on a daily basis by the Construction Manager.
  - 1. This does not apply to additional measures and revisions required for the performance of a bid categories scope of work, which may not be performed on a time and material basis as they are not to be an additional cost to the District.
- C. If SWPPP design work or changes are to be performed during each specific phase of the project; the Qualified SWPPP (QSP) must review the changes, and the Qualified SWPPP Designer (QSD) must certify the design work or changes and the respective Bid Categories responsible shall implement and maintain such changes.
- D. All Bid Categories are required to submit a written SWPPP Report to the QSP (separate from the Contractor's Daily Work Report) each day SWPPP measures are installed, revised, maintained, and or inspected. This report is to identify the location and quantities of work SWPPP measures provided, including materials, labor and equipment utilized.
- E. Failure to comply with the requirements of the SWPPP will result in damages being assessed against the Bid Category Trade Contractor(s) responsible, in the amount of a minimum \$5,000.00 per day fine.
- F. Responsible Bid Categories shall have the QSP coordinate the QSD making any and all revisions made in the field, revising the SWPPP to suit changing site conditions and also when properly installed systems are ineffective. Maintain a current SWPPP drawing on site in the Construction Manager's site office at all times.
- G. Responsible Bid Categories shall provide updates, amendments, and annual reporting information as needed. Information is to be provided to the QSP

### 3.3 TURN OVER OF PHASES

- A. Prior to acceptance of each SWPPP Phase, each responsible Bid Category Contractor shall schedule a site inspection walk with the Construction Manager/QSP and verify existing SWPPP conditions. Site walks and verification of SWPPP implementation shall be performed by the responsible SWPPP Phase Bid Category Contractor and the next subsequent SWPPP phase responsible Bid Category Contractor prior to turnover of each said SWPPP Phase. Any corrections and repairs prior to turn over of phase shall be the responsibility of the active responsible Bid Category Contractor.

### 3.4 MONITORING

- A. The District's Construction Manager will provide monitoring of the SWPPP implementation and maintenance, unless noted otherwise in this specification section which includes information to be provided by the Bid Category Contractors.

- B. Prime Contractor(s) must provide inspection logs and/or supporting documents monthly with the progress payment request.

### 3.5 LIABILITIES AND PENALTIES

- A. Review of the SWPPP and inspection log by the District shall not relieve the Contractor from liabilities arising from non-compliance of storm water pollution regulations.
- B. Payment of penalties for non-compliance by the Contractor shall be the sole responsibility of the Contractor and will not be reimbursed by the District.
- C. Any and all fines incurred with regard to pollution through ongoing construction activities will be the responsibility of the Contractor.
- D. Compliance with the Clean Water Act pertaining to construction activity is the sole responsibility of the applicable Bid Category. Failure to comply with the regulations of the Regional Water Quality Control Board (RWQCB) or other prosecuting authority may result in significant fines and possible imprisonment. Fines may be assessed up to \$32,500 (if not more) per day for each violation. Any fines, penalties levied and any related costs against the Owner due to non-compliance by the responsible bid category contractor shall be the sole responsibility of the said bid category contractor and will NOT be reimbursed by the Owner. Review of SWPPP and inspection logs by the Owner's Representative shall not relieve this contractor from liabilities arising from non-compliance of storm water pollution regulations.

### 3.6 PROJECT COMPLETION

- A. Contractor will be required to do a final Project closeout walk through as part of punchlist items.
- B. Contractor is responsible for removal and legal disposal of any remaining SWPPP temporary measures and equipment upon receipt of the Notice of Termination.

END OF SECTION

Attachments on following pages.



D. Silt Fences    \_\_\_\_\_

E. Hay bales/check dams/sandbags    \_\_\_\_\_

SWPPP Items	Acceptable	Not Acceptable	Repairs Required	Date Repairs Completed
F. Berms and Dikes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
G. Sand/Gravel Inlet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
H. Slope Protection - Polymer and Mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
I. Vegetation/Re-vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
J. Dust Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
K. Surface Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
L. Slope Instability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
M. Storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
N. Disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
O. Spills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
P. Clean up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

IV. Describe any problems or required repairs checked above and the necessary actions needed:

Item	Description of Problem or Required Repair	Action Needed
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Examination Performed by CONTRACTOR: \_\_\_\_\_

Print Name: \_\_\_\_\_ Title: \_\_\_\_\_

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



SECTION 01 71 23 FIELD ENGINEERING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDE

- A. Quality Control.
- B. Field Engineering and Staking to Be Paid for by the CONTRACTOR

1.2 QUALITY CONTROL

- A. It is each individual CONTRACTOR'S responsibility to understand, double check, and verify the placement of Surveyor's stakes prior to beginning work and notify the CONSTRUCTION MANAGER of any discrepancies, questions, and/or problems before proceeding with the work. The CONTRACTOR will provide any additional surveying, staking, and field engineering he requires at his expense.

1.3 FIELD ENGINEERING & STAKING

- A. Each Contractor to provide their own staking by a licensed Land Surveyor or a registered Civil Engineer.
- B. After the stakes are set, it shall be the CONTRACTOR'S sole responsibility to protect the stakes from any damage. Any re-staking shall be charged to the CONTRACTOR which ordered the initial staking.

END OF SECTION



## SECTION 01 73 00 - ALTERATION PROJECT PROCEDURES

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Products and installation for patching and extending Work.
- B. Transition and adjustments.
- C. Repair of damaged surfaces finishes and cleaning.

### PART 2 - PRODUCTS

#### 2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in product sections; match existing Products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspection and testing Products where necessary, referring to existing Work as a standard.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify that demolition is complete, and areas are ready for installation of new Work.
- B. Beginning of restoration Work means acceptance of existing conditions.

#### 3.2 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.
- E. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

#### 3.3 INSTALLATION

- A. Coordinate work of alterations and renovations to expedite completion sequentially and to accommodate DISTRICT occupancy.

**SECTION 01 73 00  
ALTERATION PROJECT PROCEDURES**

- B. Remove, cut and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- C. Re-finish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material with a neat transition to adjacent finishes.
- D. Restore existing and remaining plumbing, heating, ventilating and air conditioning, electrical, and fire alarm systems to full operating condition and advise ARCHITECT of any deficiencies discovered during the course of the Work.
- E. Install products as specified in individual Sections.

**3.4 TRANSITIONS**

- A. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patched Work is to match existing adjacent Work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to ARCHITECT.

**3.5 ADJUSTMENTS**

- A. Where removal of partitions or walls results in adjacent spaces becoming one, re-work floors, walls and ceilings to a smooth plane without breaks, steps or bulkheads.
- B. Where a change of plane of 1/4 inch or more occurs, request instructions from ARCHITECT. Trim existing doors as necessary to clear new floor finish. Re-finish trim as required.
- C. Fit work at penetrations in fire-rated assemblies as specified in Section 01 73 29 Cutting and Patching.

**3.6 REPAIR OF DAMAGED SURFACES**

- A. Patch or replace portions of existing surfaces which are damaged, lifted, discolored or showing other imperfections.
- B. Repair substrate prior to patching finish.

**3.7 FINISHES**

- A. Finish surfaces as specified in individual Product Sections.
- B. Finish patches to product uniform finish and texture over entire area. When finish cannot be matched, re-finish entire surface to nearest intersections.

3.8 CLEANING

- A. Conform to Section 01 50 00 Construction Facilities.

END OF SECTION

SECTION 01 73 00  
ALTERATION PROJECT PROCEDURES

## SECTION 01 73 29 CUTTING and PATCHING

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of work.

#### 1.2 SCOPE

- A. Where the work requires that a particular existing building element such as a partition, wall, paving, window, or similar element of existing building construction be removed, it is the intention of this specification that such work be a part of the demolition section and not a part of cutting and patching. Refer to individual category scope of work sheets to determine the limits of demolition work for each CONTRACTOR.
- B. New work required to replace such removals is considered as a part of the separate sections of the specifications covering similar new construction.
- C. Where incidental cutting and patching is required for the installation of a specific item or piece of equipment (including piping, ductwork, conduit, etc.), all such cutting and patching is considered to be specified as a part of the section requiring the cutting and patching.
- D. CONTRACTOR shall verify and check all areas to be cut and patched and shall coordinate the work of the various trades involved.
- E. Where doubt exists as to the size, location or method of cutting concrete or any other structural element, CONTRACTOR shall contact the ARCHITECT before proceeding.
- F. Where doubt exists, CONTRACTOR shall distinguish between "cutting" and "demolition".
- G. Unless specifically designated otherwise, existing work cut, altered, or revised to accommodate new work shall be patched to duplicate undisturbed adjacent finishes, colors, textures and profiles; concrete flatwork shall be removed to the nearest panel joint; new work in existing portions shall also be finished to match adjacent existing work unless noted otherwise.

#### 1.3 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather-exposed or moisture-resistant element.
  - 3. Efficiency, maintenance or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of DISTRICT or separate CONTRACTOR.

- B. Include in request:
1. Identification of Project.
  2. Location and description of affected work.
  3. Necessity for cutting or alteration.
  4. Description of proposed work and products to be used.
  5. Alternatives to cutting and patching.
  6. Effect on work of DISTRICT or separate CONTRACTOR.
  7. Written permission of affected separate CONTRACTOR.
  8. Date and time work will be executed.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Primary Products: Those required for original installation.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Inspect existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. Confirm status and current warranties and guarantees.
- B. After uncovering existing work, inspect conditions affecting performance of work.
1. Prior to cutting, boring or drilling through new or existing structural members or elements including reinforcing bars, CONTRACTOR shall prepare detailed drawings for review by the ARCHITECT and approval by ORS/DSA. Agency approvals shall be obtained by the ARCHITECT, not CONTRACTOR.
- C. Beginning of cutting or patching means acceptance of existing conditions.

### **3.2 PREPARATION**

- A. Provide temporary support to ensure structural integrity of the work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work.
- C. Maintain excavations free of water.
- D. Review limits of cutting with CONSTRUCTION MANAGER, prior to starting work.
- E. Mark limits of removal prior to cutting.

**3.3 CUTTING AND PATCHING**

- A. Execute cutting, fitting, and patching to complete work.
- B. Fit products together, to integrate with other work.
- C. Uncover work to install ill-timed work.
- D. Remove and replace defective or non-conforming work.
- E. Provide openings in the work for penetration of mechanical and electrical work.

**3.4 PERFORMANCE**

- A. Execute work by methods to avoid damage to other work and which will provide appropriate surfaces to receive patching and finishing.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- C. Restore work with new products in accordance with requirements of Contract Documents.
- D. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- E. At penetrations of fire-rated walls, partitions, ceiling, or floor construction, completely seal voids with fire-rated devices or material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- F. Re-finish surfaces to match adjacent finish. For continuous surfaces, re-finish to nearest intersection, or natural break. For an assembly, re-finish entire unit.

**3.5 SLEEVES AND HANGERS**

- A. Provide conduit, outlets, piping sleeves, boxes, inserts or other materials or equipment necessary to be built into work. Promptly furnish same and set such sleeves or other materials as construction program required.
- B. In the event delays occur in delivery of sleeves or other materials, arrange to have boxes or other forms set at locations where piping or other material is to pass through or into slabs or other work.
- C. Upon subsequent installation of sleeves or other material, install fill materials as required. Necessary expenditures incurred for boxing out or filling shall be without extra cost to the DISTRICT.

**END OF SECTION**

SECTION 01 73 29  
CUTTING AND PATCHING

SECTION 01 73 99 - ROOF OPENING AND UTILITY SHUTDOWN

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Requirements and limitations for roof openings.
- B. Requirements and limitations for utility shutdowns.

1.2 RELATED SECTIONS

- A. Safety Program, Section 01 35 00.

1.3 SUMMARY

- A. Protecting Owner's property from inclement weather during roof opening procedures and subsequent proposed improvements
- B. Ensuring Owner's daily operations are not compromised during utility shutdown and/or tie-ins.

1.4 ROOF OPENINGS

- A. Any CONTRACTOR who will be opening a roof shall assess with CONSTRUCTION MANAGER, the existing conditions of the roof. CONTRACTOR to coordinate work no less than three (3) weeks in advance of commencement of work. CONTRACTOR shall:
  - 1. Conduct a flood test to identify any existing ponding and leaks.
  - 2. Identify any poor conditions that require attention.
  - 3. Verify downspouts and roof receptors are un-obstructed.
  - 4. Assessment shall not only be within the limits of Work, but shall extend beyond Work limits to consider: skylights, conduits, doghouses and other areas outside.
  - 5. Provide assessment documentation to CONSTRUCTION MANAGER. CONSTRUCTION MANAGER to address any areas of concern with OWNER.
  - 6. These requirements may be performed jointly with all CONTRACTORS who will disturb the weather tightness of the building.
- B. CONTRACTOR to complete and submit "Roof Opening" form, provided herein, within two (2) weeks of the scheduled roof opening to CONSTRUCTION MANAGER.
- C. CONTRACTOR to schedule a meeting with CONSTRUCTION MANAGER. The agenda:
  - 1. Review "Roof Opening" request form.
  - 2. Confirm start and completion dates / timelines.
  - 3. Agree on existing conditions based on roof assessment.

4. Confirm CONTRACTOR's daily communication plan with CONSTRUCTION MANAGER.
  5. Review Scope of Work, coordinate between interfacing trades, discuss and resolve any scope gaps that will present continuous weather protection and restoration of a weather tight roof.
  6. Review CONTRACTOR'S Job Hazard Analysis and safety strategy. Refer to the Safety Program section 01 35 00 for additional information.
  7. Confirm CONTRACTOR'S protection strategy and continued daily maintenance.
  8. Confirm CONTRACTOR'S contingency plan. Clarify and agree on cure procedures in the event of failure to perform or protect failure.
  9. This meeting may be prepared jointly with all CONTRACTORS who will disturb the weather tightness of the building.
  10. This meeting may be held as part of the pre-roof meeting with the roofing material manufacturer.
- D. CONTRACTOR understands:
1. The "Roof Opening" request form is a tool to assist in planning and mitigating water intrusion.
  2. Submission of the "Roof Opening" form and approval to commence with the opening does not in any way authorize or approve additional project costs associated with these activities and/or minimize CONTRACTOR's obligation to provide a weather tight assembly.
  3. The responsibility to ensure roof opening(s) and/or penetration(s) are water-tight to prevent any water intrusion; regardless of, the day of week and/or time of day to ensure their proposed protection is preventing water intrusion and/or making modifications as necessary. CONTRACTOR may need to be onsite prior to, during and after inclement weather.
  4. The financial responsibility for repairs for any damage sustained.
- E. CONTRACTOR is not authorized to perform any roof opening / penetration(s) without submitting this form and obtaining approval to commence.

### 1.5 UTILITY SHUTDOWN

- A. Electrical shutdown and/or tie-in, CONTRACTOR shall assess existing circuitry to identify all buildings and equipment affected.
- B. Plumbing shutdown and/or tie-in, CONTRACTOR shall assess existing pipe routing to identify buildings and equipment affected.
- C. Assessment shall be conducted no less than four (4) weeks in advance of commencement of work.

- D. CONTRACTOR to complete and submit "Utility Shutdown / Tie-In" request form within three (3) weeks of scheduled utility shut down and/or utility tie-in to CONSTRUCTION MANAGER.
- E. CONTRACTOR to schedule a meeting within two (2) weeks with CONSTRUCTION MANAGER. The agenda:
  - 1. Review "Utility Shutdown / Tie-In" request form.
  - 2. Confirm all buildings, equipment, and utilities affected by shutdown.
  - 3. Confirm start and completion dates / timelines.
  - 4. Confirm CONTRACTOR'S daily communication plan with CONSTRUCTION MANAGER.
  - 5. Review CONTRACTOR'S Job Hazard Analysis and safety strategy. Refer to the Safety Program, Section 01 35 00 for additional information.
  - 6. Confirm CONTRACTOR'S contingency plan.
  - 7. Confirm OWNER's approval of shutdown or tie-in.
- F. Contractor understands:
  - 1. The "Utility Shutdown / Tie-In" request form is a tool to assist in planning and mitigating disruption to normal Owner activities and/or daily operations.
  - 2. Submission of the "Utility Shutdown / Tie-In" request form and approval to commence does not in any way authorize or approve additional project costs associated with these activities and/or minimize CONTRACTOR's obligation.
- G. Contractor is not authorized to perform any shut down or tie-in without submitting this form and obtaining authorization to proceed.

## PART 2 - PRODUCTS

Not Used

## PART 3 - EXECUTION

### 3.1 ROOF OPENINGS

- A. Upon "Roof Opening" request form submission and meeting, CONTRACTOR shall:
  - 1. Continually review the weather and adapt accordingly.
    - a. CONTRACTOR may need to postpone exposing work when a significant rain event is forecasted within five (5) work days.
  - 2. Conduct a pre-shift meeting. Refer to the Safety Program, Section 01 35 00 for additional information.
- B. CONTRACTOR shall have sufficient protection materials physically on the roof irrespective of

the weather forecast prior to starting any work.

C. Once the Work has commenced:

1. Ensure daily weather protection is in place before the crews leave the roof, that roof drains are clear, and the hatches are closed.
2. Ensure weather protection is performing well during any rain activity 24 hours per day and (7) days a week.
3. Assure roof openings are temporarily covered until all penetrations are 100% sealed.
4. CONTRACTOR may need to provide the necessary lighting should roof protection take place during the evening.
5. Temporary weather protection shall be capable of withstanding extreme atmospheric conditions such as sun rot, high winds, and rain-water accumulation as well as, puncture and tear. Divert water around openings and take measures to drain water outside the building.

D. Should the CONTRACTOR fail to properly protect the weather tightness of the building as described herein:

1. The DISTRICT has the right to carry out the necessary work to mitigate and remedy the situation. The CONTRACTOR shall be responsible for all cost incurred by the OWNER.
2. Any damage sustained to the building requiring remediation, the CONTRACTOR shall be responsible for all cost incurred by the OWNER.
3. All cost shall be deducted from the CONTRACTOR's contract sum.

### 3.2 UTILITY SHUTDOWN / TIE-IN

A. Upon "Utility Shutdown / Tie-In" request form submission and meeting, CONTRACTOR shall:

1. The day before and day of confirm all parties are in agreement with time lines.
2. Conduct a pre-shift meeting. Refer to the Safety Program, Section 01 35 00 for additional information.

### FORMS TO FOLLOW

ROOF OPENING REQUEST FORM

**Instructions:**

Contractor to complete and submit this form two (2) weeks in advance of the scheduled roof opening to Tilden-Coil. Contractor to schedule a meeting with Construction Manager within one week of the scheduled roof opening.

Contractor Name: \_\_\_\_\_ Building: \_\_\_\_\_  
Date Submitted: \_\_\_\_\_ Start of roof work (date): \_\_\_\_\_  
Completion of work (date): \_\_\_\_\_

**Description of roof penetration(s) and/or repairs taking place.**

- Describe the type(s) of roof openings / penetrations
- Attach roof plan showing opening / penetration location(s) with limit (size) of opening

**Describe how the exposed roof will be protected to ensure no water leaks or damage.**

- Describe in detail the materials to be used and water diversion measures Contractor will implement to ensure no water intrusion.
- Describe how Contractor will communicate to Tilden-Coil daily that proposed protection has not been compromised and/or modification have been made.

**Contractor's 24 hour contact information for roof protection**

Name:
Cell #:

**Contractor understands:**

1. The "Roof Opening" request form is a tool to assist in planning and mitigating water intrusion.
2. Submission of the "Roof Opening" form and approval to commence with the opening doesnot in any way authorize or approve additional project costs associated with these activities and/or minimize CONTRCTOR's obligation to provide a weather tight assembly.
3. The responsibility to ensure roof opening(s) and/or penetration(s) are water-tight to prevent any water intrusion; regardless of, the day of week and/or time of day to ensure their proposed protection is preventing water intrusion and/or making modifications as necessary. CONTRACTOR may need to be onsite prior to, during and after inclement weather.
4. The financial responsibility for repairs for any damage sustained.
5. CONTRACTOR is not authorized to perform any roof opening / penetration(s) without submitting this form and obtaining approval to commence.

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

### UTILITY SHUTDOWN / TIE-IN REQUEST FORM

**Instructions:**

Contractor to complete and submit this form three (3) weeks in advance of the scheduled utility shut down and/or utility tie-in to Construction Manager. Contractor to schedule a meeting with Construction Manager within two (2) weeks of the scheduled shut down and/or tie-in.

**Date Submitted:** \_\_\_\_\_ **Requested Start Date / Time :** \_\_\_\_\_ **End Date / Time:** \_\_\_\_\_

**Estimated Duration:** \_\_\_\_\_ **Hrs**

**This Request is for:** Site Utility Shutdown      Active Campus Utilities Shut Down      Off Hours Work

**Utility status during activity:** Active      Inactivate      **Construction Trades Involved:** \_\_\_\_\_

**OSHA and Site Safety** requirements discussed, reviewed and acknowledged to be in place: Yes  No

**Event Description in Detail**

Scope of Work	
Supervision Requirements	
Location of Work	
Utility / Systems Impacted	
Work to Complete prior to shutdown activities	
Special Materials or Equipment	
Impacted Trades	

**Contractor understands:**

1. The "Utility Shutdown / Tie-In" request form is a tool to assist in planning and mitigating disruption to normal Owner activities and/or daily operations.
2. Submission of the "Utility Shutdown / Tie-In" request form and approval to commence does not in any way authorize or approve additional project costs associated with these activities and/or minimize CONTRACTOR's obligation.
3. Contractor is not authorized to perform any shut down or tie-in without submitting this form and obtaining authorization to proceed.

Submitted by \_\_\_\_\_ Title: \_\_\_\_\_ Contractor: \_\_\_\_\_

Additional Information Attached: Yes      No

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

**SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Administrative and procedural requirements for the following:
  - 1. Salvaging non-hazardous construction waste.
  - 2. Recycling non-hazardous construction waste.
  - 3. Disposing of non-hazardous construction waste.

**1.2 DEFINITIONS**

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction operations. Construction waste includes packaging.
- B. 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.
- C. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- D. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- E. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

**1.3 PERFORMANCE REQUIREMENTS**

- A. General: Develop waste management plan that results in end-of-Project rates for salvage/recycling of fifty percent (50%) by weight of total waste generated by the Work.
- B. Salvage/Recycle Requirements: Salvage and recycle as much nonhazardous construction waste as possible including the following materials:
  - 1. Construction Waste:
    - a. Site-clearing waste.
    - b. Masonry and CMU.
    - c. Lumber.

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

- d. Wood sheet materials.
- e. Wood trim.
- f. Metals. Roofing.
- g. Insulation.
- h. Carpet and pad.
- i. Gypsum board.
- j. Piping.
- k. Electrical conduit.
- l. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle one hundred percent (100%) 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.

**1.4 SUBMITTALS**

- A. Submit waste management plan and progress reports under the provisions of submittals in General Conditions.
- B. Waste Management Plan: Submit plan within fourteen (14) days of date established for the Notice of Award.
- C. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit reports. 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. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- D. Forms: Prepare waste reduction progress reports on forms included at end of Part 3.

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

- E. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- F. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- G. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- H. 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.
- I. 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.

**1.5 QUALITY ASSURANCE**

- A. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01, Section 01 31 19 Coordination and Meetings. Review methods and procedures related to waste management including, but not limited to, the following:
  - 1. Review and discuss waste management plan.
  - 2. Review requirements for documenting quantities of each type of waste and its disposition.
  - 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
  - 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
  - 5. Review waste management requirements for each trade.

**1.6 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 site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

- 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 wastegeneration, 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. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
1. Total quantity of waste.
  2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
  3. Total cost of disposal (with no waste management).
  4. Revenue from salvaged materials.
  5. Revenue from recycled materials.
  6. Savings in hauling and tipping fees by donating materials.
  7. Savings in hauling and tipping fees that are avoided.

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

- 8. Handling and transportation costs. Include cost of collection containers for each type of waste.
- 9. Net additional cost or net savings from waste management plan.
- E. Forms: Prepare waste management plan on forms included at end of Part 3.

**PART 2 - PRODUCT**

NOT USED

**PART 3 - EXECUTION**

**3.1 PLAN IMPLEMENTATION**

- A. General: Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. 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 everyone concerned within three (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.
- C. 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 01 50 00 Temporary Facilities and Controls, for controlling dust and dirt, environmental protection, and noise control.

**3.2 RECYCLING CONSTRUCTION WASTE, GENERAL**

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Receivers and Processors: Licensed entity normally engaged in the business of receiving, recycling, and processing waste materials with a minimum of five (5) years of documented experience with the types of waste products to be processed under the provisions of this section.
- C. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall be shared equally by Owner and Contractor.

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

- D. 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.
  2. Inspect containers and bins for contamination and remove contaminated materials if found.
  3. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  4. Stockpile materials away from construction area. Do not store within dripline of remaining trees.
  5. Store components off the ground and protect from the weather.
  6. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

**3.3 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.
- B. Do not allow waste materials that are to be disposed of accumulate on-site. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- C. Burning: Do not burn waste materials.
- D. Disposal: Transport waste materials off Owner's property and legally dispose of them.

**3.4 FORMS**

- A. Waste Management Plan Forms Attached:
1. Construction Waste Reduction Progress Report.
  2. Construction Waste Identification.
  3. Construction Waste Reduction Work Plan.
  4. Cost Revenue Analysis of Construction Waste Reduction Work Plan.

**END OF SECTION**

### CONSTRUCTION WASTE REDUCTION PROGRESS REPORT

MATERIAL CATEGORY	GENERATION POINT	TOTAL QUANTITY OF WASTE TONS (A)	QUANTITY OF WASTE SALVAGED		QUANTITY OF WASTE RECYCLED		TOTAL QUANTITY OF WASTE RECOVERED TONS (D = B + C)	TOTAL QUANTITY OF WASTE RECOVERED % (D/Ax100)
			ESTIMATED TONS	ACTUAL TONS (B)	ESTIMATED TONS	ACTUAL TONS (G)		
Packaging: Cardboard								
Packaging: Boxes								
Packaging: Plastic Sheet or Film								
Packaging: Polystyrene								
Packaging: Pallets or Skids								
Packaging: Crates								
Packaging: Paint Cans								
Packaging: Plastic Pails								
Site-Clearing Waste								
Masonry or CMU								
Lumber: Cut-Offs								
Lumber: Warped Pieces								
Plywood or OSB (scraps)								
Wood Forms								
Wood Waste Chutes								
Wood Trim (cut-offs)								
Metals								
Insulation								
Roofing*								
Joint Sealant Tubes								
Gypsum Board (scraps)								
Carpet and Pad (scraps)								
Piping								
Electrical Conduit								
Other:								

### CONSTRUCTION WASTE IDENTIFICATION

MATERIAL CATEGORY	GENERATION POINT	EST. QUANTITY OF MATERIALS RECEIVED (A)	EST. WASTE -% (B)	TOTAL EST. QUANTITY OF WASTE* (C = A x B)	EST. VOLUME CY	EST. WEIGHT TONS	REMARKS AND ASSUMPTIONS
Packaging: Cardboard							
Packaging: Boxes							
Packaging: Plastic Sheet or Film							
Packaging: Polystyrene							
Packaging: Pallets or Skids							
Packaging: Crates							
Packaging: Paint Cans							
Packaging: Plastic Pails							
Site-Cleaning Waste							
Masonry or CMU							
Lumber: Cut-Offs							
Lumber: Warped Pieces							
Plywood or OSB (scraps)							
Wood Forms							
Wood Waste Chutes							
Wood Trim (cut-offs)							
Metals							
Insulation							
Roofing							
Joint Sealant Tubes							
Gypsum Board (scraps)							
Carpet and Pad (scraps)							
Piping							
Electrical Conduit							
Other:							
* Insert units of measure.							

CONSTRUCTION WASTE REDUCTION WORK PLAN						
MATERIAL CATEGORY	GENERATION POINT	TOTAL EST. QUANTITY OF WASTE TONS	DISPOSAL METHOD AND QUANTITY			HANDLING AND TRANSPORTATION PROCEDURES
			EST. AMOUNT SALVAGED TONS	EST. AMOUNT RECYCLED TONS	EST. AMOUNT DISPOSED TO LANDFILL TONS	
Packaging: Cardboard						
Packaging: Boxes						
Packaging: Plastic Sheet or Film						
Packaging: Polystyrene						
Packaging: Pallets or Skids						
Packaging: Crates						
Packaging: Paint Cans						
Packaging: Plastic Pails						
Site-Cleaning Waste						
Masonry or CMU						
Lumber: Cut-Offs						
Lumber: Warped Pieces						
Plywood or OSB (scraps)						
Wood Forms						
Wood Waste Chutes						
Wood Trim (cut-offs)						
Metals						
Insulation						
Roofing						
Joint Sealant Tubes						
Gypsum Board (scraps)						
Carpet and Pad (scraps)						
Piping						
Electrical Conduit						
Other:						

MAKERSPACE CONVERSION - SAN JACINTO CAMPUS  
 MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT

COST / REVENUE ANALYSIS OF CONSTRUCTION WASTE REDUCTION WORK PLAN								
MATERIALS	TOTAL QUANTITY OF MATERIALS (VOL. OR WEIGHT) (A)	EST. COST OF DISPOSAL (B)	TOTAL EST. COST OF DISPOSAL (C = A x B)	REVENUE FROM SALVAGED MATERIALS (D)	REVENUE FROM RECYCLED MATERIALS (E)	LANDFILL TIPPING FEES AVOIDED (F)	HANDLING AND TRANSPORTATION COSTS AVOIDED (G)	NET COST SAVINGS OF WORK PLAN (H = D+E+F+G)
Packaging: Cardboard								
Packaging: Boxes								
Packaging: Plastic Sheet or Film								
Packaging: Polystyrene								
Packaging: Pallets or Skids								
Packaging: Crates								
Packaging: Paint Cans								
Packaging: Plastic Pails								
Site-Clearing Waste								
Masonry or CMU								
Lumber. Cut-Offs								
Lumber: Warped Pieces or OSB								
Wood Forms								
Wood Waste Chutes								
Wood Trim (cut-offs)								
Metals								
Insulation								
Roofing								
Joint Sealant Tubes								
Gypsum Board scraps)								
Carpet and Pad (scraps)								
Piping								
Electrical Conduit								
Other:								

SECTION 01 75 00 - STARTING OF SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Starting systems.
- B. Demonstration and instructions.

1.2 STARTING SYSTEMS

- A. Coordinate with commissioning plan and commissioning agent for all commissioning requirements.
- B. Coordinate schedule for start-up of various equipment and systems.
- C. Notify DISTRICT prior to start-up of each item.
- D. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or other conditions which may cause damage.
- E. Verify that tests, meter readings and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- F. Verify wiring and support components for equipment are complete and tested.
- G. Execute start-up under supervision of responsible manufacturer's representative and/or CONTRACTORS' personnel in accordance with manufacturers' instructions, and as required for commissioning.
- H. When specified in individual specification sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up and to supervise placing equipment or system in operation.
- I. Submit a written report that equipment or system has been properly installed and is functioning correctly.

1.3 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to DISTRICT'S personnel two (2) weeks prior to date of Substantial Completion.
- B. Demonstrate Project equipment by a qualified manufacturers' representative who is knowledgeable about the Project.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six (6) months.

**SECTION 01 75 00  
STARTING OF SYSTEMS**

- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with DISTRICTS' personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times at equipment location.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.
- H. Video tape training and submit to CONSTRUCTION MANAGER for record.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**

**SECTION 01 78 00 - WARRANTIES AND BONDS**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Preparation and submittal.
- B. Time and schedule of submittals.

**1.2 RELATED SECTIONS**

- A. Document: Notice Inviting Bids, Information for Bidders, and Bid Bonds.
- B. Document: General Conditions: Performance Bond and Labor and Material Payment Bonds, Warranty and Correction of Work.
- C. Section 01 78 39 Contract Closeout: Contract closeout procedures.
- D. Individual Specifications Sections: Warranties required for specific products or Work.

**1.3 FORM OF SUBMITTALS**

- A. Bind in commercial quality, 8½ x 11 inch, three-ring side binders with hardback, cleanable, plastic covers.
- B. Label cover of each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of CONTRACTOR and equipment supplier; and name of responsible principal.
- C. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified and the name of the product or work item.
- D. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List subcontractor, supplier and manufacturer, with name, address, and telephone number of responsible principal.

**1.4 PREPARATION OF SUBMITTALS**

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers and manufacturers, within ten (10) days after completion of the applicable item or work. Except for items put into use with DISTRICT'S permission, leave date of beginning of time of warranty until the Date of Substantial Completion is determined.
- B. Verify that documents are in proper form, contain full information and are notarized.
- C. Co-execute submittals when required.

- D. Retain warranties and bonds until time specified for submittal.

**1.5 TIME OF SUBMITTALS**

- A. For equipment or component parts of equipment put into service during construction with DISTRICT'S permission, submit documents within ten (10) days after acceptance.
- B. Make other submittals within ten (10) days after Date of Substantial Completion, prior to final Application for Payment.
- C. For items of Work when acceptance is delayed beyond Date of Substantial Completion, submit within ten (10) days after acceptance, listing the date of acceptance as the beginning of the warranty period.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**GUARANTEE**

We hereby guarantee that the \_\_\_\_\_, which we have installed for **Mt. San Jacinto Community College District at Makerspace Conversion – San Jacinto Campus** has been performed in accordance with the requirements of the Contract Documents and that the work as installed will fulfill the requirements of the Contract Documents.

The undersigned agrees to repair or replace any or all of such work that may prove to be defective in workmanship or material together with any other adjacent work which may be displaced in connection with such replacement within a minimum period of **ONE (1) YEAR** from the date of acceptance of the above-mentioned project by **Mt. San Jacinto Community College District**, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of the undersigned's failure to comply with the above mentioned conditions within a reasonable period of time, as determined by the District, but not later than ten (10) working days after being notified in writing by the District, the undersigned authorizes the District to proceed to have said defects repaired and made good at the expense of the undersigned, which will pay the costs and charges therefore upon demand.

\_\_\_\_\_  
CONTRACTOR

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
TYPED OR PRINTED NAME

Representatives to be contacted for service subject to terms of contract.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

PHONE # \_\_\_\_\_

**CONTRACTOR'S CERTIFICATE  
REGARDING ASBESTOS  
MATERIAL**

This form is to be submitted at the time final billing is provided.

"I certify that all the materials and supplies installed under this

**MSJC – Makerspace Conversion – San Jacinto Campus**  
(Name of Contract)

contract are free of asbestos-containing materials."

\_\_\_\_\_  
Date

\_\_\_\_\_  
Official Name of CONTRACTOR

\_\_\_\_\_  
By

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

SECTION 01 78 39 CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Adjusting.
- C. Project record documents.
- D. Operation and maintenance data.
- E. Warranties and guarantees.
- F. Spare parts, maintenance manuals, and materials.
- G. Instructions to DISTRICT'S personnel.
- H. Commissioning

1.2 CLOSEOUT PROCEDURES

- A. Partial Occupancy and Substantial Completion:
  - 1. See the appropriate Articles in the General Conditions describing close- out procedures, punch lists, substantial completion, etc.
  - 2. Conform to Part 1, Title 24, Section 4-343 CCR, Requirements for Form 6-C (Verified Reports) and Closeout Procedures.
  - 3. In conjunction with the Project Inspector, prepare a list of items to be completed or corrected. List may be developed by areas, when approved by the ARCHITECT.
  - 4. Within a reasonable time after receipt of the list, the ARCHITECT will inspect to determine status of completion.
  - 5. Should the ARCHITECT determine that Work is not substantially complete:
    - a. The ARCHITECT will promptly notify the CONTRACTOR in writing, giving the reasons for his determination.
    - b. CONTRACTOR shall remedy the deficiencies and notify the ARCHITECT when Work is ready for re-inspection.
    - c. The ARCHITECT will re-inspect the Work.
    - d. Comply with mandatory requirements as set forth in the General Conditions for beneficial or partial occupancy

6. When the ARCHITECT concurs that work is substantially complete:
  - a. The ARCHITECT will prepare a "Certificate of Substantial Completion" on AIA Form G704, or form as included in the Supplementary Conditions, accompanied by the CONTRACTOR'S list of items to be completed or corrected as verified by the ARCHITECT.
  - b. The ARCHITECT will submit the Certificate to the DISTRICT and to the CONTRACTOR for their written acceptance of their responsibilities assigned to them in the Certificate.
- B. Final Completion:
  1. Prepare and submit a notice that Work is ready for final inspection and acceptance, and as defined in the General Conditions, with all work complete, including fire/life safety systems.
  2. Verify the Work is complete.
  3. Certify that:
    - a. Work has been inspected by all governing agencies and is in compliance with Contract Documents.
    - b. Work has been inspected for compliance with the Contract Documents.
    - c. Work has been completed in accordance with the Contract Documents.
    - d. Equipment and systems have been tested as required and are operational.
    - e. Work is completed and ready for final inspection.
  4. The ARCHITECT will make an inspection to verify status of completion.
  5. Should the ARCHITECT determine the Work is incomplete or defective:
    - a. The ARCHITECT will promptly notify the CONTRACTOR in writing, listing incomplete or defective work.
    - b. CONTRACTOR shall remedy the deficiencies promptly and notify the ARCHITECT when ready for re-inspection.
  6. When the ARCHITECT determines the Work is acceptable under the Contract Documents, he will request the CONTRACTOR to make closeout submittals.
- C. Closeout submittals include, but are not necessarily limited to:
  1. Project Record Documents/As-Built Documents.

2. Operation and maintenance data for items so listed in pertinent Sections of these Specifications and for other items when so approved by the ARCHITECT.
  3. Warranties and Guarantees.
  4. Keys and keying schedule.
  5. Spare parts, materials, extra stock to be turned over to the DISTRICT.
  6. Evidence of payment and release of liens, when requested by DISTRICT.
  7. List of subcontractors, service organizations and principal vendors, including names, addresses and telephone numbers, where they may be contacted for emergency service at all times, including nights, weekends and holidays.
  8. Video recordings.
- D. Final Payment:
1. Submit a Final Payment Request, showing all adjustments to the ContractSum.
  2. Retention will be released no sooner than thirty-five (35) days and not later than sixty (60) days after Notice of Completion has been recorded with the County Recorder's Office.

### 1.3 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

### 1.4 PROJECT RECORD DOCUMENTS/AS-BUILT DOCUMENTS

- A. DISTRICT will provide one (1) set of blue line drawings and one (1) copy of the Project Manual, or computer with electronic as-builts, for use during construction to record changes made during construction manually.
- B. Record in concise and neat manner and on a weekly basis all actual revisions to the work:
1. Changes made on the Drawings, including Clarification Drawings.
  2. Changes made to the Specifications.
  3. Changes made by Addenda.
  4. Changes made by Instruction Bulletins.
  5. Change Orders or other authorized Modifications to the Contract.
  6. Revisions made to shop drawings, product data and samples.
- C. Store Record Documents separate from documents used for construction. Replace soiled or illegible documents.

- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
  - 1. Manufacturer's name, trade name, product model and number, and supplier.
  - 2. Authorized product substitutions or alternates utilized.
  - 3. Changes made by Addenda and Modifications.
- F. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Measured depths of foundations in relation to finish first floor datum.
  - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Identify drains and sewers by invert elevation.
  - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work. Identify ducts, dampers, valves, access doors, and control equipment wiring.
  - 4. Field changes of dimension and detail.
  - 5. Details not on original Drawings.
  - 6. Refer to Scope Summaries for electronic as-built requirements.
- G. Obtain Inspector's signed certification that Record Documents have been fully updated prior to submitting monthly payment requests. Compliance is mandatory before payment will be made.
- H. Submit Inspector's certified documents to ARCHITECT with claim for final Application of Payment. Fully completed record drawings are a prerequisite to final payment.
- I. The DISTRICT, at his option, may require the preparation of a final reproducible "RECORD SET" of drawings that incorporate all changes made during the construction process to include incorporation of all change orders, addenda, field orders and "As Installed" conditions noted on the CONTRACTOR prepared record documents. The preparation and printing cost of the "RECORD SET" is not a part of the contract.

#### 1.5 OPERATION AND MAINTENANCE DATA

- A. Submit three (3) sets prior to final inspection, bound in 8½ x 11 inch text pages, in binders with durable covers, tabbed by specification section and/or other organizing heading.

- B. Deliver to CONSTRUCTION MANAGER'S home office, itemized and inventoried on transmittal.

#### 1.6 WARRANTIES AND GUARANTEES

- A. Submit three (3) wet-signed originals separate from Operation and Maintenance data.
- B. Manufacturer's warranties and guarantees notwithstanding, warrant entire Work against defects in materials and workmanship for twelve (12) months from date of Substantial Completion. Warranties and guarantees between CONTRACTOR and manufacturers and CONTRACTOR and suppliers shall not affect warranties or guarantees between CONTRACTOR and DISTRICT.
- C. Execute and assemble documents from subcontractors, suppliers and manufacturers.
- D. Submit to CONSTRUCTION MANAGER prior to final Application for Payment.
- E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing date of acceptance as start of warranty period.

#### 1.7 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to CONSTRUCTION MANAGER'S home office, inventoried and transmitted similar to Operation and Maintenance manuals.

#### 1.8 UNDERGROUND WET UTILITY VIDEO

- A. Upon completion of the storm drain system, the Plumbing CONTRACTOR shall fully flush the storm drain system and confirm proper functionality. Additionally, the CONTRACTOR shall provide all services necessary to electronically view and record (video) the improvements to the storm drain system. The IOR shall witness the review and recording process. The CONTRACTOR shall turn-over two (2) copies of the documented review (video tape, DVD - media of the DISTRICT'S choice) of the storm drain system at the completion of the project.
- B. Upon completion of the sewer system, the Plumbing CONTRACTOR shall fully flush the sewer system and confirm proper functionality. Additionally, the CONTRACTOR shall provide all services necessary to electronically view and record (video) the improvements to the sewer system at all interior clean outs and main lines and all exterior building P.O.C./cleanout out to the public system P.O.C.. The IOR shall witness the review and recording process. The CONTRACTOR shall turn-over two (2) copies of the documented review (video tape, DVD - media of the DISTRICT'S choice) of the sewer system at the completion of the project.

**1.9 INSTRUCTIONS TO DISTRICT'S PERSONNEL**

- A. Instruct the DISTRICT'S personnel in proper operation and maintenance of all systems, equipment and similar items, which were provided as part of the work. Provide maintenance and inspection schedules that conform to manufacturer's recommendations.
- B. CONTRACTOR shall provide a schedule to the DISTRICT for approval for each of the instruction periods required.
  - 1. Organize the instruction sessions into group sizes and schedule the elapsed time for instruction in a manner to provide complete coverage of the subject matter. Video each session and provide DISTRICT with two (2) copies on DVD.
- C. Instruction sessions will be held in a DISTRICT designated area on the project site and at DISTRICT'S convenience. Amount of time required for each session shall be as specified in individual sections.
- D. Instructors shall be qualified by the product manufacturer in the subject matter presented at each session.
  - 1. Submit names of instructors and qualifications to the ARCHITECT and DISTRICT for approval thirty (30) days prior to each scheduled session.
  - 2. Substitution of instructors will not be permitted without prior approval of ARCHITECT or DISTRICT.

**1.10 COMMISSIONING**

- A. Comply with Commissioning Agent's requirements for functional observation testing documentation

**1.11 DVBE CLOSE-OUT STATEMENT**

- A. Complete the form entitled Disabled Veteran Business Enterprise ("DVBE") Trade Contractor Close-Out Statement.
- B. Submit to CONSTRUCTION MANAGER prior to final payment.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

END OF SECTION

## PART 1 – GENERAL

### 1.1 SUMMARY

- A. Includes but Not Limited To:
  - 1. Demolition and removal of selected portions of building or structure.
  - 2. Salvage of existing items to be reused or recycled.

### 1.2 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Conference: Before beginning Selective Demolition work, in addition to requirements of Section 01 45 , meet on site to confirm work to be demolished, items to be salvaged or reused, and coordination with Owner.
- B. Scheduling: Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, on Schedule specified in Section 01 31 19.
- C. Coordinate with recommendations of the designated District environmental consultants for abatement of hazardous materials including: asbestos, lead, other hazardous materials including; PCBs in transformers, fluorescent lamp recycle/disposal, radon abatement, and lead paint removal, VCT, TSI, etcetera.
- D. The following items are to be salvaged for the District:
  - IT Racks
  - Cabinets
  - Marker Boards
  - Tack Boards
- E. Pre-removal Meeting
  - 1. Schedule a pre-removal meeting with Architect, Owner's Representative, Project Inspector and Contractor in attendance.
- F. Storage or sale of removed items or materials will not be permitted on-site.

### 1.3 SUBMITTALS

- A. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.

#### 1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI A10.6 and NFPA 241.
- C. Comply with C.F.C. Chapter 33.

#### 1.5 FIELD CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

#### PART 2 - PRODUCTS:

(Not Used)

#### PART 3 - EXECUTION

##### 3.1 EXAMINATION

- A. Hazardous Materials:
  - 1. It is not expected that hazardous materials will be encountered in the Work. Identified hazardous materials will be removed by Owner before start of the Work.
  - 2. If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify Architect.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Contractor shall use the utmost care in their removal, so as to insure the least possible damage.
- D. Contractor to inventory all salvaged items, palletize, and shrink-wrap.
- E. Contractor is responsible for salvaged items until accepted by the District Project Manager.
- F. Contractor to deliver salvaged material to a location on campus designated by the District Project Manager.
- G. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure nature and extent of conflict. Promptly submit written report to Architect.

- E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

### 3.2 PREPARATION

- A. Temporary Facilities:
  - 1. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 2. Maintain fire-protection facilities in service during selective demolition operations.
- B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished. Strengthen or add new supports when required during progress of selective demolition.
- C. Utility Services:
  - 1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
  - 2. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
    - a. Arrange to shut off indicated utilities with utility companies.
    - b. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

### 3.3 SELECTIVE DEMOLITION

- A. General:
  - 1. Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 2. Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

- a. 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. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  - b. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - c. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
  - d. Maintain adequate ventilation when using cutting torches.
  - e. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  - f. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  - g. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - h. Dispose of demolished items and materials promptly.
- B. Selective Demolition Procedures for Specific Materials:
1. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.
  2. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
  3. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.
- C. Removed and Salvaged Items:
1. Relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.
    - a. Clean salvaged items as directed by Owner.
    - b. Pack or crate items after cleaning. Identify contents of containers.
    - c. Store items in a secure area until delivery to Owner.
    - d. Transport items to Owner's storage area designated by Owner.
    - e. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.4 CLEANING

- A. Disposal of Demolished Materials:
1. Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.
    - a. Do not allow demolished materials to accumulate on-site.
    - b. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
    - c. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION



**SECTION 07 25 00 – WEATHER BARRIERS**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Water-Resistive Barrier: Under exterior wall cladding, over sheathing or other substrate; not air tight or vapor retardant.

**1.2 RELATED REQUIREMENTS**

- A. Section 07 92 00 - Joint Sealants: Sealing building expansion joints.

**1.3 DEFINITIONS**

- A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.
- B. Water-Resistive Barrier: Water-shedding barrier made of material that is moisture resistant, to the degree specified, intended to be installed to shed water without sealed seams.

**1.4 REFERENCE STANDARDS**

- A. AATCC Test Method 127 - Water Resistance: Hydrostatic Pressure Test; 2018.
- B. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2017.
- C. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2018.
  - 1. Use 2013 as indicated in 2016 CBC Referenced Standards.
- D. ASTM D4869/D4869M - Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing; 2016a.
- E. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2016.
- F. ICC-ES AC188 - Acceptance Criteria for Roof Underlayments; 2012, with Editorial Revision (2015).
- G. ICC-ES AC38 - Acceptance Criteria for Water-Resistive Barriers; 2016.

**1.5 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.

## 1.6 SUBMITTALS

- A. See Section 01 33 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on material characteristics.

## 1.7 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

## PART 2 PRODUCTS

### 2.1 WEATHER BARRIER ASSEMBLIES

- A. Water-Resistive Barrier: Provide on exterior walls under exterior cladding.
  - 1. Use plastic sheet unless otherwise indicated.
  - 2. Under Portland cement stucco, additionally use two separate layers of building paper.
  - 3. Under siding, use two separate layers of building paper.

### 2.2 WATER-RESISTIVE BARRIER MATERIALS (NEITHER AIR BARRIER OR VAPOR RETARDER)

- A. Building Paper: Asphalt-saturated Kraft building paper complying with requirements of ICC-ES AC38 Grade D.
  - 1. Water Penetration Resistance: Withstand a water head of 21 inches, minimum, for minimum of five hours, when tested in accordance with AATCC Test Method 127.
  - 2. Manufacturers:
    - a. Fortifiber Corporation JUMBO-TEX secondary layer only, asphalt-saturated Kraft-Type paper complying with Federal Specification UUB 790a, Type 1, Grade D, Style 2.
    - b. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Plastic Sheet: Polymeric-based sheet complying with requirements of ICC-ES AC38 Grade D with 60-minute water-resistance; do not use polyethylene sheet.
  - 1. Manufacturers:
    - a. Certainteed, Inc.; CertaWrap Weather-Protection Membrane: [www.certainteed.com](http://www.certainteed.com).
    - b. DuPont Building Innovations; Tyvek Commercial Wrap D with FlexWrap NF, StraightFlash, StraightFlash VF, Tyvek Wrap Caps, and Tyvek Tape: [www.dupont.com](http://www.dupont.com).
    - c. Fiberweb, Inc.; Typar MetroWrap: [www.typar.com](http://www.typar.com).

- d. Substitutions: Division 1 - Product Requirements.

## 2.3 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.
- B. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M, except slip resistance requirement is waived if not installed on a roof.
1. Composition: Modified bituminous sheet laminated to polyethylene sheet.
  2. Minimum Requirements: Comply with requirements of 1 for non-self-adhesive sheet.
  3. Self Sealability: Passing nail sealability test specified in 1.
  4. Low Temperature Flexibility: Passing test specified in 1.
  5. Water Vapor Permeance: 0.067 perm, when tested in accordance with 1 Procedure A (desiccant method).
  6. Performance: Meet or exceed requirements for 1, Type II asphalt-saturated organic felt.
  7. Liquid Water Transmission: Passes 1.
  8. Functional Temperature Range: Minus 70 degrees F to 240 degrees F.
  9. Manufacturers:
    - a. DuPont Building Innovations; FlexWrap NF: [www.dupont.com/#sle](http://www.dupont.com/#sle).
    - b. Fortifiber Building Systems Group; FortiFlash: [www.fortifiber.com/#sle](http://www.fortifiber.com/#sle).
    - c. Fortifiber Building Systems Group; FortiFlash Commercial: [www.fortifiber.com/#sle](http://www.fortifiber.com/#sle).
    - d. GCP Applied Technologies; Perm-A-Barrier Detail Membrane: [gcpat.com/en/solutions/products/perm-a-barrier-air-barrier-system](http://gcpat.com/en/solutions/products/perm-a-barrier-air-barrier-system).
    - e. InterWrap, Inc. Mission, BC Canada ; Product Titanium-PSU-30; [www.interwrap.com](http://www.interwrap.com).
    - f. Protecto Wrap; Jiffy Seal 140/60 Air/Vapor Barrier: [www.protectowrap.com](http://www.protectowrap.com).
    - gi. Soprema, Inc.; Product Lastobond Shield HT MU; [www.soprema.us](http://www.soprema.us).
    - hj. Substitutions: Division 01 - Product Requirements.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that surfaces and conditions are ready to accept the work of this section.

### 3.2 PREPARATION

- A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
- B. Clean and prime substrate surfaces to receive adhesives in accordance with manufacturer's instructions.

### 3.3 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Water-Resistive Barriers: Install continuous barrier over surfaces indicated, with sheets lapped to shed water but with seams not sealed.
  - 1. Apply water-resistive barrier complying with Section 1404.2 of the CBC, Section R703.2 of the CRC, or Section 1402.1 of the CBC.
- C. Apply sealants and adhesives within recommended application temperature ranges. Consult manufacturer if temperature is out of this range.
- D. Openings and Penetrations in Exterior Weather Barriers: Comply with Drawing details. As a minimum provide the following:
  - 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
  - 2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.
  - 3. At openings to be filled with non-flanged frames, seal weather barrier to each side of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.
  - 4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.
  - 5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
  - 6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

### 3.4 FIELD QUALITY CONTROL

- A. See Section 01 45 00 - Quality Control, for additional requirements.
- B. Take digital photographs of each portion of the installation prior to covering up.

3.5 PROTECTION

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.
- B. Do not leave paper- or felt-based barriers exposed to weather for longer than one week.

END OF SECTION



SECTION 07 84 13 - PENETRATION FIRESTOPPING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Firestopping systems.
- B. Firestopping of all joints and penetrations in fire resistance rated and smoke resistant assemblies, whether indicated on drawings or not, and other openings indicated.

1.2 RELATED REQUIREMENTS

- A. Section 01 73 29 - Cutting and patching.
- B. Section 09 21 16 - Gypsum Board Assemblies

1.3 REFERENCE STANDARDS

- A. California Building Code: Section 714 - Penetrations and 715 - Fire Resistant Joint Systems.
- B. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirement shall govern.
- C. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2015.
  - 1. Use 2012a as indicated in 2019 CBC Referenced Standards.
- D. ASTM E814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops; 2013a.
  - 1. Use 2013 as indicated in 2019 CBC Referenced Standards.
- E. ASTM E1966 - Standard Test Method for Fire Resistive Joint Systems; 2007 (Reapproved 2011).
  - 1. Use 2007a as indicated in 2019 CBC Referenced Standards.
- F. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestops; 2014.
  - 1. Use 2010ae1 as indicated in 2019 CBC Referenced Standards.
- G. ASTM E2393 - Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers; 2010a.
  - 1. Use 2010ae1 as indicated in 2019 CBC Referenced Standards.
- H. ASTM E2307 - Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-story Test Apparatus; 2015a.
  - 1. Use 2010 as indicated in 2019 CBC Referenced Standards.

- I. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; ITS (DIR) - Directory of Listed Products; current edition.
- J. FM 4991 - Approval Standard for Firestop Contractors; 2013.
- K. FM (AG) - FM Approval Guide; current edition.
- L. Firestop Contractors International Association (FCIA): M.O.P. Manual of Practice.
- M. International Firestop Council (IFC); [www.firestop.org](http://www.firestop.org):
  - 1. Reference 1: Recommended IFC Guidelines for Evaluating Firestop Engineering Judgments.
  - 2. Reference 2: Inspectors Pocket Guide; Fifth Edition.
- O. NFPA 101 - Life Safety Code; 2016.
  - 1. Use 2016 as indicated in 2019 CBC Referenced Standards.
- P. SCAQMD 1168 - South Coast Air Quality Management District Rule No. 1168; current edition.
- Q. UL 1479 - Standard for Fire Tests of Penetration Firestops; Current Edition, Including All Revisions.
  - 1. Use 2015 as indicated in 2019 CBC Referenced Standards.
- R. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.
  - 1. Use 2015 as indicated in 2019 CBC Referenced Standards.
- S. UL (DIR) - Online Certifications Directory; current listings at [database.ul.com](http://database.ul.com).
- T. UL (FRD) - Fire Resistance Directory; current edition.
  - 1. UL runs ASTM E814 under their designation of UL 1479 and publishes the results in their "FIRE RESISTANCE DIRECTORY" that is updated annually with a midyear supplement.
  - 2. Through-Penetration Firestop Devices (XHCR)
  - 3. Fire Resistance Ratings (BXUV)
  - 4. Through-Penetration Firestop Systems (XHEZ)
  - 5. Fill, Voids, or Cavity Material (XHHW)
  - 6. Forming Materials (XHKU)
- U. UL Qualified Firestop Contractor Program

#### 1.4 SUBMITTALS

- A. See Section 01 33 00 - Administrative Requirements, for submittal procedures.
- B. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.
- C. Product Data: Provide data on product characteristics, performance ratings, and limitations.
- D. Sustainable Design Submittal: Submit VOC content documentation for all non-preformed materials.
- E. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.
- F. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- G. Certificate from authority having jurisdiction indicating approval of materials used.
- H. Installer Qualification: Submit qualification statements for installing mechanics.

#### 1.5 QUALITY ASSURANCE

- A. Provide products for all trades from the same manufacturer to the greatest extent possible and from the same supplier/distributor.
- B. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
  - 1. Listing in UL (FRD), FM (AG), or ITS (DIR) will be considered as constituting an acceptable test report.
  - 2. Valid evaluation report published by ICC Evaluation Service, Inc. (ICC-ES) at [www.icc-es.org](http://www.icc-es.org) will be considered as constituting an acceptable test report.
  - 3. Submission of actual test reports is required for assemblies for which none of the above substantiation exists.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
  - 1. One firestop manufacturer shall be used for the entirety of applications on this project unless otherwise approved by the Architect. The manufacturer will be required to furnish UL tested systems for all applications pertaining to the project, in addition to material safety data sheets and all other relevant information.
    - a. Materials of different manufacture than allowed by the tested and listed system shall not be intermixed in the same firestop system or opening.
    - b. Tested and listed firestop systems are to be used before an Engineering Judgment (EJ) or Equivalent Fire Resistance Rated Assembly (EFRR) is installed.
  - 2. A manufacturer's knowledgeable direct representative (manufacturer authorized; distributor, independent representative, manufacturer's representative, or agent) to be on-site during initial installation of firestop systems to train appropriate contractor personnel in proper selection and installation procedures. This will be done per manufacturer's written recommendations published in their literature and drawing details.
- D. Installer Qualifications: Company specializing in performing the work of this section and:
  - 1. Trained by manufacturer.
  - 2. Approved by Factory Mutual Research Corporation under FM 4991, or meeting any

two of the following requirements:

- a. UL Qualified Firestop Contractor
- b. Verification of minimum three years documented experience installing work of this type.
- c. Shown to have successfully completed not less than 5 comparable scale projects.
- d. Verification of at least five satisfactorily completed projects of comparable size and type.
  
- e. Firestop Contractors International Association Contractor Member in good standing.
- f. Licensed by local authorities having jurisdiction (AHJ).

## 1.6 FIELD CONDITIONS

- A. Conform to firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.
- B. Provide ventilation in areas where solvent-cured materials are being installed.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Firestopping Manufacturers:
  1. Basis of Design: Specified Technologies, Inc: [www.stifirestop.com/#sle](http://www.stifirestop.com/#sle).
  2. 3M Fire Protection Products: [www.3m.com/firestop](http://www.3m.com/firestop).
  3. A/D Fire Protection Systems Inc: [www.adfire.com](http://www.adfire.com).
  4. Hilti, Inc.: [www.us.hilti.com/#sle](http://www.us.hilti.com/#sle).
  5. Nelson FireStop Products: [www.nelsonfirestop.com](http://www.nelsonfirestop.com).
  6. Rectorseal; Bio FireShield and Metacaulk Systems: [www.rectorseal.com](http://www.rectorseal.com).
  7. Substitutions: See Section 01 25 00 - Product Requirements.

### 2.2 REGULATORY REQUIREMENTS

- A. Firestop System installation must meet requirements of ASTM E814, ASTM E2307, ASTM E1966 and UL 1479 or UL 2079 tested assemblies that provide a fire rating equal to that of construction being penetrated.
  1. Positive pressure in accordance with California Building Code (CBC) for ratings. Reference: CBC Section 714.3.1.2.
  2. Comply with UL Standard 2079 for top of wall assemblies.
  3. Conform to CBC Section 714.3.1.1 and 714.3.2.
- B. For those firestop applications that exist for which no UL tested system is available through any manufacturer, a manufacturer's engineering judgment derived from similar UL system designs or other tests will be submitted to local authorities having jurisdiction for their review and approval prior to installation. Engineer judgment drawings must follow requirements set forth by the International Firestop Council (September 7, 1994).

## 2.3 MATERIALS

- A. Firestopping Materials: Any materials meeting requirements.
- B. Volatile Organic Compound (VOC) Content: Provide products having VOC content lower than that required by SCAQMD 1168.
- C. Mold and Mildew Resistance: Provide firestopping materials with mold and mildew resistance rating of zero (0) in accordance with ASTM G21.
- D. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials as required for tested firestopping assembly.
- E. Fire Ratings: Refer to drawings for required systems and ratings.

## 2.4 FIRESTOPPING ASSEMBLY REQUIREMENTS

- A. Through Penetration Firestopping: Use system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.
  - 1. Temperature Rise: Provide systems that have been tested to show T Rating as indicated
  - 2. Air Leakage: Provide systems that have been tested to show L Rating as indicated.
  - 3. Water Tightness: Provide systems that have been tested to show W Rating as indicated.
  - 4. Listing by FM (AG), ITS (DIR), UL (DIR), or UL (FRD) in their certification directories will be considered evidence of successful testing.

## 2.5 FIRESTOPPING PENETRATIONS THROUGH GYPSUM BOARD WALLS

- A. Penetrations By:
  - 1. Penetrations by Structural Struts, Cables or Threaded Rod:
    - a. 1 and 2 Hour Wall Construction: UL System W-L-7136; F Rating: 1 and 2 Hour; T Rating: 0 Hour; SpecSeal Series SSS Sealant, SpecSeal LCI Sealant, SpecSeal LC150 Sealant, or SpecSeal LE600 Sealant.
  - 2. Multiple Penetrations in Large Openings:
    - a. 1, 2, 3, and 4 Hour Wall Construction with EZ Path: UL System W-L-3377; F Rating: 1, 2, 3, and 4 Hour; T Rating: 0, 1/2, 3/4, 1, 1-1/2, and 2 Hour; Firestop Device: EZ PATH Series 22, 33 or 44+ Fire Rated Pathway, optional steel sleeve.
    - b. 1 and 2 Hour Wall Construction: UL System W-L-8026; F Rating: 1 and 2 Hour; T Rating: 0, 1/2, 1, 1-3/4 and 2 Hour; mineral wool packing with SpecSeal Series SSS Sealant or SpecSeal LCI Sealant.
    - c. 1 and 2 Hour Wall Construction: UL System W-L-1168; F Rating: 1 and 2 Hour; T Rating: 1/4, 3/4 and 1 Hour; SpecSeal LC150 Sealant, SpecSeal Series SSS Sealant or SpecSeal LCI Sealant.
    - d. 1 and 2 Hour Wall Construction: UL System W-L-3214; F Rating: 1 and 2 Hour; T Rating: 1/4, 3/4 and 1 Hour; SpecSeal LC150 Sealant, SpecSeal Series SSS Sealant or SpecSeal LCI Sealant.
    - e. 1 and 2 Hour Wall Construction: UL System W-L-8027; F Rating: 1 and 2 Hour; T Rating: 1/4 Hour; SpecSeal LCI Sealant.
  - 3. Uninsulated Metallic Pipe, Conduit, and Tubing:
    - a. 1 and 2 Hour Wall Construction: UL System W-L-1049; F Rating: 1 and 2 Hour; T Rating: 0 Hour; SpecSeal Series SSS Sealant or SpecSeal LCI Sealant.

- b. 1 and 2 Hour Wall Construction: UL System W-L-1222; F Rating: 1 and 2 Hour; T Rating: 1/4, 3/4 and 1 Hour; SpecSeal LCI Sealant.
- c. 1 and 2 Hour Wall Construction: UL System W-L-1049; F Rating: 1 and 2 Hour; T Rating: 0 Hour; SpecSeal 100, 101, 102, 105, 120 or 129 Sealant, SpecSeal LCI Sealant.
- 4. Uninsulated Non-Metallic Pipe, Conduit, and Tubing:
  - a. 1 and 2 Hour Wall Construction with pipe clamp ring: UL System W-L-2029; F Rating: 1 and 2 Hour; T Rating: 1, 1-1/2 and 2 Hour; SpecSeal Firestop Collar, SpecSeal LCI Collar.
  - b. 1 and 2 Hour Wall Construction: UL System W-L-2100; F Rating: 1 and 2 Hour; T Rating: 0, 1/4, 1 and 1-1/2 Hour; SpecSeal Series SSS Sealant or SpecSeal LCI Sealant.
  - c. 1 and 2 Hour Wall Construction: UL System W-L-2241; F Rating: 1 and 2 Hour; T Rating: 0, 1/4, 1, and 1-3/4 Hour; SpecSeal LCI Sealant.
  - d. 1 and 2 Hour Wall Construction: UL System W-L-2548; F Rating: 1 and 2 Hour; T Rating: 0 Hour; SpecSeal LCI Sealant or SpecSeal Series SSS Sealant.
- 5. Electrical Cables Not in Conduit:
  - a. 1 and 2 Hour Wall Construction: UL System W-L-3169; F Rating: 1 and 2 Hour; T Rating: 1/4 and 3/4 Hour; SpecSeal LCI Sealant.
  - b. 1 and 2 Hour Wall Construction: UL System W-L-3210; F Rating: 1 and 2 Hour; T Rating: 3/4 Hour; mineral wool packing with SpecSeal Series SSS Sealant, SpecSeal LCI Sealant or SpecSeal Putty.
- 6. Cable Trays with Electrical Cables:
  - a. 2 Hour Construction: UL System W-L-4011; Hilti CFS-BL Firestop Block.
  - b. 1 and 2 Hour Wall Construction: UL System W-L-4074; F Rating: 1 and 2 Hour; T Rating: 1/4, 1/2, 1 and 1-1/4 Hour; mineral wool packing with SpecSeal LCI Sealant.
  - c. 1 Hour Construction: UL System W-L-4011; Hilti CFS-BL Firestop Block.
- 7. Insulated Pipes:
  - a. 1 and 2 Hour Wall Construction: UL System W-L-S014; F Rating: 1 and 2 Hour; T Rating: 1 Hour; SpecSeal Series SSS Sealant or SpecSeal LCI Sealant.
  - b. 1 and 2 Hour Wall Construction: UL System W-L-5054; F Rating: 1 and 2 Hour; T Rating: 3/4 and 1 Hour; SpecSeal Series SSS Sealant or SpecSeal LCI Sealant.
  - c. 1 Hour Construction: UL System W-L-5028; Hill FS-ONE MAX Intumescent Firestop Sealant.
  - d. 1 Hour Construction: UL System W-L-5029; Hilti FS-ONE Intumescent Firestop Sealant.
  - e. 1 Hour Construction: UL System W-L-5096; Hilti FS-ONE Intumescent Firestop Sealant.
  - f. 1 Hour Construction: UL System W-L-5096; Hilti FS-ONE Intumescent Firestop Sealant, CP 606 Flexible Firestop Sealant, or CP 601S Elastomeric Firestop Sealant.
- 8. HVAC Ducts, Uninsulated:
  - a. 1 and 2 Hour Wall Construction with up to 100 x 100 inch duct: UL System W-L-7025; F Rating: 1 and 2 Hour; T Rating: 1/2 Hour; Polyethylene backer rod

- or mineral wool packing with SpecSeal Series SSS Sealant, SpecSeal LCI Sealant, SpecSeal LC150 Sealant or SpecSeal LE 600 Sealant.
- b. 1 and 2 Hour Wall Construction with up to 24 inch round duct: UL System W-L-7026; F Rating: 1 and 2 Hour; T Rating: 0 Hour; Polyethylene backer rod or mineral wool packing with SpecSeal Series SSS Sealant, SpecSeal LCI Sealant, SpecSeal LC150 Sealant or SpecSeal LE 600 Sealant.
  - c. 1 and 2 Hour Wall Construction with up to 24 x 24 inch duct: UL System W-L-7029; F Rating: 1 and 2 Hour; T Rating: 1/4 Hour; Polyethylene backer rod or mineral wool packing with SpecSeal Series SSS Sealant, SpecSeal LCI Sealant, SpecSeal LC150 Sealant or SpecSeal LE 600 Sealant.
9. HVAC Ducts, Insulated:
- a. 1 and 2 Hour Wall Construction with up to 20 inch round duct: UL System W-L-7179; F Rating: 1 and 2 Hour; T Rating: 3/4 Hour; SpecSeal Series SSS Sealant, or SpecSeal LCI Sealant.
  - b. 1 Hour Construction: UL System W-L-7156; Hilti FS-ONE MAX Intumescent Firestop Sealant.

## 2.6 FIRESTOPPING SYSTEMS

- A. Firestopping: Any material meeting requirements.
  - 1. Fire Ratings: Use system that is listed by FM (AG), ITS (DIR), or UL (FRD) and tested in accordance with ASTM E814, ASTM E119, or UL 1479 with F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and in compliance with other specified requirements.

## PART 3 EXECUTION

### 3.1 SEQUENCING AND SCHEDULING

- A. Project coordination is essential to inform and educate all the parties involved with the firestopping process of their role and how they can affect firestopping on the project. A pre-construction meeting shall be scheduled and required for all parties involved prior to the start of construction.
- B. Do not cover up firestopping installations until District's inspection agency or the Authorities having Jurisdiction have examined each installation.

### 3.2 EXAMINATION

- A. Verify openings are ready to receive the work of this section.
- B. Pre-Installation Inspection: Inspect all fire and smoke barriers for penetrations of any type; mark or otherwise identify all penetrations indicating action required: 1) repair; 2) firestopping; or 3) smokestopping.
  - 1. Conduct inspection prior to covering up or enclosing walls or ceilings.
  - 2. Conduct inspection jointly with authorized representative of authority having jurisdiction.

- C. If the configuration of a particular penetration does not conform to the configuration necessary for the required firestopping assembly:
  - 1. Notify the installer of the penetration for modification of the configuration to suit the assembly.
  - 2. Do not use the firestopping assembly in other configurations except as specifically stated in the test report or as approved by the authority having jurisdiction.

### 3.3 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.
- 8. Remove incompatible materials that could adversely affect bond.
- C. Install backing materials to prevent liquid material from leakage.
- D. Priming:
  - 1. Prime substrates where recommended by firestopping manufacturer using that manufacturer's recommended products and methods.
  - 2. Confine primers to areas of bond.
  - 3. Do not allow spillage and migration onto exposed surfaces.
- E. Masking Tape:
  - 1. Use masking tape to prevent firestopping from contacting adjoining surfaces that will remain exposed upon completion of Work.
  - 2. Remove tape as soon as it is possible to do so without disturbing the firestopping seal with substrates.
- F. Verify that system components are clean, dry, and ready for installation.
- G. Verify that field dimensions are as shown on the Drawings and as recommended by the manufacturer.
- H. Prepare penetrations in accordance with the material manufacturer's instructions.
  - 1. Ventilation: Ventilate per firestopping manufacturers' instructions or Material Safety Data Sheet (MSDS).

### 3.4 INSTALLATION

- A. Install materials in manner described in firestopping report and in accordance with manufacturer's instructions, completely closing openings.
  - 1. Provide all accessory materials.
- B. Do not cover installed firestopping until inspected by District's Independent Testing Agency.

- C. Penetration Firestops:
  - 1. Coordinate with other trades to assure that all pipes, conduit, cable, and other items which penetrate fire rated construction, have been permanently installed prior to installation of firestop assemblies.
  - 2. Schedule the work to assure that partitions and all other construction that conceals penetrations are not erected prior to the installation of firestop and smoke seals.
  - 3. Install forming/damming materials and other accessories in accordance with manufacturers written instructions.
  - 4. Install fill materials for through-penetration firestop systems by proven techniques to produce the following results:
    - a. Completely fill voids and cavities formed by openings, forming materials, accessories, and penetrating items.
    - b. Install materials so they contact and adhere to substrates formed by openings and penetrating items.
  - 5. For fill materials that will remain exposed after completing work, finish to produce smooth, uniform surfaces
- D. Remove combustible forming materials, unless they are a required component of the tested assembly.
- E. Do not cover installed firestopping until inspected by authorities having jurisdiction.
- F. Install labeling required by code:
  - 1. Near fire and smoke barriers, mark each exposed penetration with label identifying it as a fire-stopped or smoke-stopped assembly.

### 3.5 FIELD QUALITY CONTROL

- A. Independent Testing Agency: Inspection agency employed and paid by District, will examine penetration firestopping in accordance with ASTM E2174, and ASTM E2393.
- B. The inspector shall advise the Contractor of any deficiencies noted within one (1) working day.
- C. Repair or replace penetration firestopping and joints at locations where inspection results indicate firestopping or joints do not meet specified requirements.
- D. Do not proceed to enclose firestopping with other construction until inspection agency has verified that the firestop installation complies with the requirements.
- E. Submit report of inspection to the Construction Manager and Architect.

### 3.6 CLEANING

- A. Hazardous disposal of firestop materials shall be strictly observed as noted on the individual MSDS.

- B. Clean adjacent surfaces of firestopping materials.
  - 1. Clean up excess material adjacent to penetrations promptly; use methods and materials approved by the manufacturers of the penetration seals and of surfaces to be cleaned.

**3.7 PROTECTION**

- A. Protect adjacent surfaces from damage by material installation.
- B. Protect firestopping during and after curing period from contact with contaminating substances.
- C. Protect installed Work from damage from construction operations using substantial barriers as necessary.
- D. Repair damaged materials in accordance with manufacturer's instructions.

**END OF SECTION**

## SECTION 07 92 00 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Preparing substrate surfaces.
- B. Sealant and joint backing.
- C. Related Section:
  - 1. Section 07 84 00, Firestopping. For fire-rated assemblies.

#### 1.2 REFERENCE STANDARDS

- A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.
- B. ASTM C834 - Latex Sealing Compounds.
- C. ASTM C881 - Epoxy-Resin Base Bonding Systems for Concrete.
- D. ASTM C919 - Use of Sealants in Acoustical Applications.
- E. ASTM C920 - Elastomeric Joint Sealants.
- F. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.
- G. ASTM C1184 - Structural Silicone Sealant.
- H. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- I. ASTM C1311 - Solvent Release Sealants. Butyl and acrylic base polymer.
- J. ASTM C1330 - Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
- K. ASTM C1635 Standard Test Method to Evaluate Adhesion/Cohesion Properties of a Sealant at Fixed Extensions
- L. SWRI (Sealant, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification ([www.SWRIONLINE.org](http://www.SWRIONLINE.org)).
- M. GANA: Glass Association of North America Sealant Manual, 2008.
- N. California Green Building Standards Code, CALGreen - 2016.
- O. SCAQMD - South Coast Air Quality Management District Regulations Rule 1168 Adhesive and Sealant Applications

#### 1.3 SUBMITTALS

- A. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.
- B. CALGreen Submittals:

1. Product Data Sheets and Declaration Statements showing compliance with CALGreen code per 1.04.E.
- C. Manufacturer's installation Instructions: Indicate special procedures, surface preparation, and perimeter conditions requiring special attention.
- D. Provide color samples of each type of sealant to be used.
- E. Provide product data for each type of sealant indicating elasticity and durability.

#### 1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform acoustical sealant application work in accordance with ASTM C919.
- C. Prepare sample joints in the construction to demonstrate to the Architect the quality of the Work to be performed. Accepted sample joints will be used to judge the quality of the Work.
- D. Qualifications
  1. Manufacturer: Company specializing in manufacturing the Products specified in this Section with minimum three years' experience.
  2. Applicator:
    - a. Pre-qualified applicator specializing in performing Work of this Section with minimum three years' experience and approved by manufacturer.
    - b. This applicator shall be licensed joint sealing specialty Contractor.
    - c. Submit list of completed local projects of similar sealant applications.
- E. California Green Building Standards Code, CALGreen - 2016.
  1. Adhesives, sealants, primers, and caulks shall comply with air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, per CALGreen Tables 5.504.4.1 and 5.504.4.2.
- F. Comply with Air Quality regulations, California Regulations:
  1. SCAQMD Rule 1168 compliant VOC limit of 250.

#### 1.5 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

#### 1.6 COORDINATION

- A. Coordinate the Work with all Sections referencing this Section.

## 1.7 WARRANTY

- A. Provide ten-year product warranty, submit under provisions of Division 01, General Requirements.
- B. Provide two-year installer's warranty, submit under provisions of Division 01, G General Requirements.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve air tight seal, water tight seal, exhibit loss of adhesion or cohesion, or do not cure.
- D. Upon written notification of failure due to defective materials or application, repair or replace failure to the approval of the Architect and at no cost to Owner.

## PART 2 - PRODUCTS

### 2.1 SEALANT AND MATERIAL MANUFACTURERS

- A. Following is list of acceptable manufacturers of sealants and sealant materials. Inclusion in this list is not intended to imply that all manufacturers make all products. Products made by listed manufacturers must comply with all specified requirements.
  - 1. Sika <http://usa.sika.com/>
  - 2. Tremco <http://www.tremcosealants.com/>
  - 3. BASF (Sonneborn) <https://www.master-builders-solutions.basf.us/en-us/products/sealants-caulks>
  - 4. Pecora <http://pecora.com/>
- B. Substitutions: Under provisions of Division 01, General Requirements.

### 2.2 SEALANT TYPES

- A. Single-Component Urethane: ASTM C 920, Type S, Grade NS, Class 35, Use NT, A, M, and O; USDA and FDA status.
- B. Single-Component Urethane (Self-Leveling): ASTM C 920, Type S, Grade P, Class 35, Use T, A, M.
- C. Multi-Component Urethane (Gun-Grade): ASTM C 920, Type M, Grade NS, Class 35, Use NT, A, M, and O.
- D. Multi-Component Polyurethane (Gun-Grade): ASTM C 920, Type M, Grade NS, Class 35, Use T, A, M, and O.
- E. Multi-Component Urethane (Self-Leveling): ASTM C 920, Type M, Grade P, Class 25, Use T, A, M, and O.
- F. Single-component sealant, Silicone (Neutral-curing): ASTM C 920, Type S, Grade

NS, Class 35, Use NT, G, A, M, and O; USDA, NSF and FDA 21 CFR 177.2600 approved.

- G. Single-component sealant, Silicone (Neutral-curing.): ASTM C 920, Type S, Class 100/50, Grade P, Use T, and O.
- H. Single-component, modified silicone polymer (silyl-terminated polyether resin - STPe), elastomeric sealant with plus-100-percent to minus-50-percent movement and complying with ASTM C-920, Type S, Grade NS, Uses NT, G, M, A, and O.
  - 1. Acceptable Product: BASF, Sonolastic 150 Tint Base, or equal. Color shall be as selected by the Architect from the manufacturer's full range of available colors.
- I. Acrylic-Latex Caulk: ASTM C 834, Type OP or C, Grade 18 deg. C.
- J. Bedding Compound: For installation of thresholds and similar items indicated to be bedded in sealant, use a preformed butyl-polyisobutylene sealant tape. Size of tape as required for the specific application.
- K. Adhesives: Type that complies with Mil. Spec. MIL-A-46146
  - 1. Product: Dow Corning 3145 Silicone Adhesive
  - 2. Color: Clear or Translucent.
  - 3. Peel Strength: 75
- L. Acoustical Sealant - gunnable type, non-drying, non-hardening permanently flexible, ASTM C919, ASTM C834, ASTM C920.
  - 1. Manufacturers: Tremco Acoustical Sealant, U.S. Gypsum Sheetrock Acoustical Sealant, Pecora Corp. BA-98 or equal.
- M. Fire-Rated Sealants: Per Section 07 84 00 Firestopping.
- N. Butyl Sealants: Butyl rubber sealant, BC-158 by Pecora or equal in compliance with VOC regulations of local Air Quality Districts.

### 2.3 JOINT AND SURFACE TYPES

- A. Vertical Joints - Provide one of the following for each joint type:
  - 1. Multi-component urethane (gun-grade)
  - 2. Single-component sealant, silicone (neutral cure)
- B. Expansion, Control, and Perimeter Joints - Provide one of the following for each joint type:
  - 1. Multi-component urethane (self-leveling)
  - 2. Single-component urethane; use only where dynamic movement will not exceed 50 percent of joint width - above or below grade

3. Single-component urethane (self-leveling)
  4. Single-component sealant, silicone.
- C. Curtainwalls, storefronts, entrances, and Related Assemblies - Provide one of the following for each joint type or installation at perimeter of aluminum-framed systems:
1. Single-component silicone (neutral-curing)
  2. Non-Moving Joints, Interior and Exterior: Single-component sealant, silicone neutral cure),-ASTM C920.
- D. Water-Immersion Areas - Provide one of the following for each joint type, ASTM C920, Class 25, Use I, T, NT, M, and O.:
1. Multi-component urethane (self-leveling)
  2. Single-component urethane (self-leveling)
  3. Multi-component polysulfide (self-leveling)
  4. Multi-component polysulfide (non-sag)
- E. Glazing - Provide one of the following for each joint type:
1. Single-component sealant, silicone (neutral-curing).
  2. Structural silicone sealant for Structural Glazing.
- F. Acoustical Sealant - gunnable, provide the following:
1. Non-drying, non-hardening, non-skinning sealant type, ASTM C919.
  2. Acrylic-latex caulk, Type OP opaque or Type C clear at visual locations, ASTM C834.
  3. Chemically curing Sealant, for interior sound reduction application, ASTM C920.
- G. Acoustical Putty Pads - QuietPutty 380 by Quiet Rock or equal.
1. Thickness: 1/8"
  2. Width: 7"
  3. Length: 7"
  4. Surface Burning Characteristics: Class A
- H. Smoke and Acoustical Sealant: ASTM C834, Hilti CP 506 (openings), CP 572 (joints), STI SpecSeal "Smoke 'N' Sound Acoustical Spray".
- I. Toilet and Bath Areas: Sealant containing a fungicide for mildew resistance - Provide one of the following for each joint type:
1. Single-component silicone (neutral-curing)
  2. Single-component silicone (acid cure)

- J. Exterior Doors and Windows: Sealant used for exterior joints or butyl rubber.
  - 1. Fire-rated sealant at fire-rated assemblies per Section 07 84 00.
- K. Interior Doors and Windows - Provide one of the following for each joint type:
  - 1. Single-component sealant, silicone (neutral cure)
  - 2. Fire-rated sealant at fire-rated assemblies per Section 07 84 00.
- L. Built-In Cabinet Work: In kitchen, toilet, and bath areas, as specified for those areas.  
In other areas, single-component silicone (neutral-curing) or acrylic-latex caulk.
- M. Rated Walls: Fire-rated Sealant, per UL Systems classification and in accordance with Section 07 84 00.
  - 1. Fire-rated sealant between rated walls or ceilings and their adjoining rated materials and construction, including but limited to door and window frames.
- N. Miscellaneous locations: Butyl rubber at all gaps, holes, openings, under wood sills, penetrations or channel metal track in exterior envelope of building not identified herein. Install as directed by the Architect.
- O. Seal all cutouts and penetrations: For electrical, mechanical, plumbing and structural framing cutouts and penetration at interior surfaces with acoustical sealant and fire-rated sealant for rated walls per section 07 84 00, or butyl rubber for exterior surfaces including walls.

## 2.4 SEALANT COLORS

- A. Provide materials matching colors indicated or if no color is indicated, matching the color samples selected from those submitted to the Architect.
  - 1. Sealant between walls and door, window, and louver frames to match adjacent wall color.

## 2.5 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing Rod: ASTM C1330 Class C, closed cell polyethylene cylindrical backer rod; oversized 30 to 50 percent larger than joint width, Green Rod by Nomaco Inc., Zebulon, NC, Backer Rod Mfg. Denver, CO or equal.
- D. Elastomeric Tubing Sealant Backing: ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.
- E. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

- F. Filler: Mineral fiber board; ASTM C612, Class I, thickness same as joint, depth to fill void completely behind backer-up rod.
- G. Tape Sealants; pressure sensitive, 100% solid, sealing tape with a release paper backing. Provide permanent elastic, non-sagging, non-toxic, non-staining tape sealant. Schnee-Morehead Inc. "Tacky Tape" SM5227, 3/32" or 1/2" wide x 3/8" thick x 45' long, or equal.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify that substrate surfaces and joint openings are ready to receive Work.
- B. Verify that joint backing and release tapes are compatible with sealant.
- C. Test for compatibility prior to start of work.
- D. Prime joints.
- E. Install with backer rods.
- F. No joint to exceed 1-inch or manufacturers suggested width, whichever is smaller.

#### **3.2 PREPARATION**

- A. Remove loose materials and foreign matter which might impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions.
- D. Protect elements surrounding the Work of this Section from damage or disfiguration.
- E. At deep joints install filler material to fill space behind the back-up rod and position the rod at proper depth.

#### **3.3 INSTALLATION**

- A. Do not proceed with sealant Work until the sample joints specified in Part 1 of this Section have been prepared and accepted by the Architect.
- B. Install sealant in accordance with manufacturer's instructions and ASTM C1193.
- C. Apply sealant per ASTM C919 at gypsum board framed sound walls, side of runners in metal framing and miscellaneous openings and cutouts.
- D. Measure joint dimensions and size materials to achieve required 2:1 width/depth ratios.
- E. Install joint backing to achieve a neck dimension no greater than 1 /3 of the joint width.

- F. Install bond breaker where joint backing is not used.
- G. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- H. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- I. Tool joints concave unless detailed otherwise.

**3.4 CLEANING**

- A. Clean adjacent soiled surfaces.

**3.5 PROTECTION OF FINISHED WORK**

- A. Protect finished installation under provisions of Division 01, General Requirements.
- B. Protect sealants until cured.

**END OF SECTION**

**SECTION 08 71 00 – DOOR HARDWARE**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
  - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
  - 2. ICC/IBC - International Building Code.
  - 3. NFPA 70 - National Electrical Code.
  - 4. NFPA 80 - Fire Doors and Windows.
  - 5. NFPA 101 - Life Safety Code.
  - 6. NFPA 105 - Installation of Smoke Door Assemblies.
  - 7. State Building Codes, Local Amendments.
  - 8. 521 CMR – Massachusetts Architectural Board Regulations.
- B. Standards: All hardware specified herein shall comply with the following industry standards:
  - 1. ANSI/BHMA Certified Product Standards - A156 Series
  - 2. UL10C – Positive Pressure Fire Tests of Door Assemblies

**1.3 SUBMITTALS**

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
  2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
  3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    - e. Explanation of abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for door hardware.
    - g. Warranty information for each product.
  4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Keying Schedule: Coordinate with District representative.
- D. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this

Project and whose work has resulted in construction with a record of successful in-service performance.

- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
  - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
  - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- E. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service.

#### 1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

## 1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
  - 1. Faulty operation of the hardware.
  - 2. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
  - 1. Ten years for extra heavy duty cylindrical (bored) locks and latches.
  - 2. Two years for electromechanical door hardware.

## 1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

## PART 2 - PRODUCTS

### 2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door

Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

- C. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

## 2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
  - 1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
    - a. Two Hinges: For doors with heights up to 60 inches.
    - b. Three Hinges: For doors with heights 61 to 90 inches.
    - c. Four Hinges: For doors with heights 91 to 120 inches.
    - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
  - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
    - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
    - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
  - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
    - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
    - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
  - 4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
    - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
    - b. Acceptable Manufacturers:
      - i. IVES (IV)

## 2.3 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
  - 1. Acceptable Manufacturers:
    - a. ASSA Abloy
- C. Cylinders: Original manufacturer cylinders complying with the following:
  - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
  - 2. Keyway: Manufacturer's Standard. Match Facility Restricted Keyway.
- D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1, certified cylinders employing a utility patented and restricted keyway requiring the use of patented controlled keys. Provide bump resistant, fixed core cylinders as standard with solid recessed cylinder collars. Cylinders are to be factory keyed where permanent keying records will be established and maintained.
  - 1. Provide a 6 pin multi-level master key system comprised of patented controlled keys and security and high security cylinders operated by one (1) key of the highest level. Geographical exclusivity to be provided for all security and high security cylinders and UL437 certification where specified.
    - a. Level 1 Cylinders: Provide utility patented controlled keyway cylinders that are furnished with patented keys available only from authorized distribution.
    - b. Level 2 Cylinders: Provide utility patented controlled keyway and side bar locking incorporating unique angled bottom pins for geographical exclusivity. Cylinders constructed to provide protection against bumping and picking.
    - c. Level 3 Cylinders: Provide utility patented controlled keyway and side bar locking incorporating unique angled bottom pins for geographical exclusivity. Cylinders to be UL437 certified and constructed to provide protection against bumping, picking, and drilling.
    - d. Refer to hardware sets for specified levels.
  - 2. Acceptable Manufacturer:
    - a. ASSA Abloy
- E. Keying System: Each type of lock and cylinders to be factory keyed.
  - 1. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.

- F. Key Quantity: Provide the following minimum number of keys:
  - 1. Change Keys per Cylinder: Two (2)
- G. Key Control Software: Provide one network version of "Key Wizard" branded key management software package that includes one year of technical support and upgrades to software at no charge. Provide factory key system formatted for importing into "Key Wizard" software.

## 2.4 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
  - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
  - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
  - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
- B. Standards: Comply with the following:
  - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
  - 2. Strikes for Bored Locks and Latches: BHMA A156.2.
  - 3. Strikes for Auxiliary Deadlocks: BHMA A156.5.
  - 4. Dustproof Strikes: BHMA A156.16.

## 2.5 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

## 2.6 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

#### 3.2 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
  - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
  - 2. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

### 3.3 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

### 3.4 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

### 3.5 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

### 3.6 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.
- B. All manufacturers must demonstrate that the operating mechanism has been tested for 5 lbs. maximum force. CBC 11B-309.4

### 3.7 DOOR HARDWARE SCHEDULE

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

END OF SECTION

**SECTION 09 22 36 - LATH**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Metal lath for cement plaster.
- B. Furring for metal lath.

**1.2 RELATED REQUIREMENTS**

- A. Section 07 25 00 - Weather Barriers: Weather barrier under exterior plaster and stucco.
- B. Section 09 24 00 - Cement Plastering.

**1.3 REFERENCE STANDARDS**

- A. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- B. ASTM C841 - Standard Specification for Installation of Interior Lathing and Furring; 2003 (Reapproved 2018).
  - 1. Use 2003(2013) as indicated in 2019 CBC Ch. 35 Referenced Standards.
- C. ASTM C847 - Standard Specification for Metal Lath; 2018.
  - 1. Use 2012 as indicated in 2019 CBC Ch. 35 Referenced Standards.
- D. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.
- E. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2018.
  - 1. Use 2007 as indicated in 2019 CBC Ch. 35 Referenced Standards.
- F. ASTM C1032 - Standard Specification for Woven Wire Plaster Base; 2018.
- G. ASTM C1063 - Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster; 2019.
  - 1. Use 2012d as indicated in 2019 CBC Ch. 35 Referenced Standards.
- I. Plaster Assemblies Manual - Technical Information Services Bureau (TSIB) of Western Walls & Ceilings Contractors Association (WWCCA); Current Edition.

**1.4 SUBMITTALS**

- A. See Section 01 33 00 - Administrative Requirements, for submittal procedures.

- B. Product Data: Provide data on furring and lathing components, structural characteristics, material limitations, and finish.

## 1.5 QUALITY ASSURANCE

- A. Maintain one copy of each installation standard referenced on site throughout the duration of lathing and plastering work.
- B. Installer Qualifications: Company specializing in performing the work of this section with at least three years of documented experience.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Metal Lath: All products listed are "or equal".
  1. Brand X Metals: [www.brandxmetals.com](http://www.brandxmetals.com).
  2. Cemco: [www.cemcosteel.com/#sle](http://www.cemcosteel.com/#sle).
  3. Clarkwestern Dietrich Building Systems LLC: [www.clarkdietrich.com/#sle](http://www.clarkdietrich.com/#sle).
  4. Fry Reglet: [www.fryreglet.com](http://www.fryreglet.com).
  5. Pittcon Industries: [www.pittconindustries.com](http://www.pittconindustries.com).
  6. Structa Wire Corporation: [www.structawire.com/#sle](http://www.structawire.com/#sle).
  7. Substitutions: See Section 01 60 00 - Product Requirements.

### 2.2 FRAMING AND LATH ASSEMBLIES

- A. Provide completed assemblies with the following characteristics:
  1. Maximum Deflection of Vertical Assemblies: 1:360 under lateral point load of 100 lbs.
  2. Maximum Deflection of Horizontal Assemblies: 1:240 deflection under dead loads and wind uplift.
- B. Fire Rated Assemblies: Provide components complying with requirements for fire rated assemblies specified in the section where the plaster finish is specified.

### 2.3 LATH

- A. Diamond Mesh Metal Lath: ASTM C847, galvanized; self-furring.
  1. Weight: To suit application, comply with deflection criteria, and as specified in ASTM C841 or ASTM C1063 for framing spacing.

2. Minimum Weight: 3.4 lb/sq yd.
- B. Ribbed Metal Lath: ASTM C847, galvanized; 3/8 inch thick. For soffit use only.
1. Weight: To suit application, comply with deflection criteria, and as specified in ASTM C841 or ASTM C1063 for framing spacing.
  2. Minimum Weight: 3.4 lb/sq yd.
- C. Corner Mesh: Formed sheet steel, minimum 0.018 inch thick, perforated flanges shaped to permit complete embedding in plaster, minimum 2 inch size; same finish as lath.
- D. Strip Mesh: Expanded metal lath, same weight as lath, 2 inch wide by 24 inch long; same finish as lath.
- E. Beads, Screeds, Joint Accessories, and Other Trim: Depth governed by plaster thickness, maximum possible lengths.
1. Galvanized Steel Accessories:
    - a. Types specified below conforming to Technical Services Information Bureau of the Western Walls and Ceilings Contractors Association (WWCCA) "Plaster Assemblies Manual".
    - b. Where galvanized accessories are specified, use hot-dip galvanized steel, ASTM A653, designation G60.
    - c. Provide metal shapes, of longest possible length, used as grounds of such size and dimension as to provide for required plaster thickness.
  2. Material: Formed galvanized sheet steel, expanded metal flanges.
  3. Casing Beads with Weep Holes: Square edges.
    - a. Product: #66 Expanded Flange Casing Bead manufactured by Cemco.
    - b. Fabricated of 26 gage hot-dip galvanized steel. Provide beads with expanded metal flange and inverted vee at plaster edge of face flange.
  4. Corner Beads: Square-Edge corners.
    - a. Corner Reinforcement: Fabricated from expanded metal with large openings, from welded or woven copper bearing steel wire of minimum 28 gage, hot-dip galvanized, minimum 3 inches wide.
      - 1) Product: No. 2-A Corner Bead manufactured by Cemco.
      - 2) Product: No. 2-A Reinforced Flange Corner Bead manufactured by Cemco.
    - b. Cornerite: Expanded Metal, weighing 0.105 pounds per lineal foot, bent in center to form 105 degree angle, 6 inches wide (total).
      - 1) Product: Cornerite manufactured by Cemco.

5. Base Screeds: Bevelled edges.
  - a. Foundation Weep Screeds: Perforated type.
    - 1) Product: No. 7 Foundation Sill Screed manufactured by Cemco.
    - 2) Product: No. 7 Extended Foundation Screed manufactured by Cemco. For locations where plaster is just above a paving surface.
6. Drip Screeds: Fabricated from 0.018 inch thick; G-90 hot-dip galvanized steel.
  - a. Product: #12 Soffit Drip Edge manufactured by Cemco.
  - b. Product: #6 Head Drip Screed manufactured by Cemco. For locations above other flashing such as door and window heads.
7. Window/Door Drips: Self weeping 26 gage hot-dip galvanized steel.
  - a. Product: No. 3 Flashing Screed manufactured by Cemco. For locations where plaster is offset 1-1/2 inches back from projection.
8. Soffit Vent:
  - a. Material: Extruded Aluminum ASTM B221 (ASTM B221M), 6063 alloy, T5 temper.
  - b. Size: As indicated on Drawings.
  - c. Finish: Clear Anodized.
  - d. Product: Soffit Vent PCS-75-V-400 (example for 4 inch size with 3-coat plaster) manufactured by Fry Reglet.
9. Strip Lath: Strip Reinforcement (Expanded Metal), weighing 2.5 lbs/sq.yd., 6 inches wide. Use hot-dip galvanized at all locations where galvanized metal lath occurs.
10. Control Joints: Accordion profile with factory-installed protective tape, 2 inch flanges.
  - a. Product: Double "V" Control Joint (#15) manufactured by Cemco.
  - b. Stress Relief Joints (Expansion and Control Joints): Stress Relief Control Joints, fabricated of 26 gage (0.0217 inch) hot-dip galvanized steel with G60 hot-dip galvanized coating.
- 1) Recesses on control joints shall be covered with removable tape or filled with rope to prevent plaster from filling the recess.
11. Aluminum Accessories (Where Detailed):
  - a. Specified Manufacturer: Fry Reglet Corporation; [www.fryreglet.com](http://www.fryreglet.com).
  - b. Acceptable Manufacturers:
    - 1) Interior Specialties Division, Gordon, Inc.; [www.gordon-inc.com](http://www.gordon-inc.com).
    - 2) Substitutions: See Section 01 60 00 - Product Requirements.

- c. Casing Beads: Fry Reglet, F-shaped aluminum, FPM-75-75, 3/4 inch reveal or Fry J-Molding JPM-75 as detailed.
- d. Control Joints: Fry Reglet, Channel Screed, PCS-75-50, 1/2 inch wide reveal or as detailed on Drawings.
- e. All intersections factory fabricated with joints heliarc welded and backs sealed with permanent waterproof tape. Provide connector clips and sealant at butt joints of straight sections.
- f. Aluminum Finish:
  - 1) Clear anodized.
- g. Fasteners: 1-1/4 inch long S-12 pancake head, USG, Buildex Division of Illinois Tool Works or equal.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Verify existing conditions before starting work.
- B. Verify that substrates are ready to receive work and conditions are suitable for application.
- C. For exterior plaster and stucco on stud walls, verify that water-resistive barrier has been installed over sheathing substrate completely and correctly.
  - 1. Do not allow the control or expansion joints to interrupt or be lapped with the weather barrier.
- D. Do not begin until unacceptable conditions have been corrected.
- E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### **3.2 INSTALLATION - GENERAL**

- A. Install interior lath and furring for gypsum plaster in accordance with ASTM C841.
- B. Install metal lath and furring for Portland cement plaster in accordance with ASTM C1063.
- C. Install lath and furring for fire-rated assemblies in accordance with requirements of assembly as indicated.

### **3.3 CEILING AND SOFFIT FRAMING INSTALLATION**

- A. Install furring after work above ceiling or soffit is complete. Coordinate the location of hangers with other work.
- B. Install furring independent of walls, columns, and above-ceiling work.

- C. Securely anchor hangers to structural members or embed in structural slab. Space hangers as required to limit deflection to criteria indicated. Use rigid hangers at exterior soffits.
- D. Space main carrying channels at maximum 72 inch on center, and not more than 6 inches from wall surfaces. Lap splice securely.
- E. Securely fix carrying channels to hangers to prevent turning or twisting and to transmit full load to hangers.
- F. Install furring channels perpendicular to carrying channels, not more than 2 inches from perimeter walls, and rigidly secure. Lap splices securely.
- G. Reinforce openings in suspension system that interrupt main carrying channels or furring channels with lateral channel bracing. Extend bracing minimum 24 inches past each opening.
- H. Laterally brace suspension system.

### 3.4 CONTROL AND EXPANSION JOINT INSTALLATION

- A. At unsheathed open framing, provide double stud construction behind control joint.
- B. Locate joints as indicated on drawings and comply with ASTM C1063.
  - 1. Area of plaster panel not to exceed 144 sq ft for vertical surfaces.
    - a. Expansion Joint Spacing: 36 feet on center and as indicated on drawings.
  - 2. Area of plaster panel not to exceed 100 sq ft for horizontal, curved or angled surfaces.
  - 3. Spacing between control joints not to exceed 18 ft in each direction.
    - a. Narrow panels should not exceed 12 feet in length.
  - 4. Area bounded by control joints not to exceed a length-to-width ratio of 2-1/2 to 1.
  - 5. Vertical control joints should pass through horizontal control joints. Vertical control joints must terminate at horizontal expansion joints.
  - 6. Joint Placement: Approved by Architect before plastering.
- C. Install expansion joints where an expansion joint occurs in base exterior wall.
- D. Install prefabricated joint accessories in accordance with ASTM C1063.
  - 1. Install factory-made joints at reveal-to-reveal and reveal-to-control joint intersections.

- E. Discontinue metal lath at joint and apply 12 inch wide strip of flexible flashing behind each joint
- F. Hold casing beads back 3/8 to 1/4 inch from abutting frames and other elements to provide joint for sealant.
- G. Apply sealant at splices, intersections and terminals in accordance with Section 07 92 00 - Joint Sealants.

### **3.5 ACCESS PANELS INSTALLATION**

- A. Install access panels and rigidly secure in place.
- B. Install frames plumb and level in opening. Secure rigidly in place.
- C. Position to provide convenient access to concealed work requiring access.

### **3.6 LATH INSTALLATION**

- A. Apply lath taut, with long dimension perpendicular to supports.
- B. Lath shall not be continuous through control or expansion joints.
- C. Apply ribbed lath with self-furring ribs perpendicular to supports at soffits and horizontal surfaces.
  - 1. Lap sides of ribbed lath minimum 1-1/2 inches.
  - 2. Nest outside ribs of rib lath together.
  - 3. Attach lath to supports using specified screws at maximum 6 inches on center vertical and 16 inches on center horizontal.
  - 4. At horizontal metal lath application, secure lath to each support with specified screws.
- D. Expanded metal lath at vertical supports, apply self-furring "grooved" metal lath with self-furring rib perpendicular to supports.
  - 1. Install per Table 2507.2 California Building Code.
  - 2. Installation shall maintain lath 1/4 inch away from vertical supports.
- E. Attach metal lath to supports using screws at maximum 12 inches on center.
- F. Attach horizontal metal lath to metal supports using tie wire at maximum 6 inches on center vertical.

- G. Continuously reinforce internal angles with corner mesh, except where the metal lath returns 3 inches from corner to form the angle reinforcement; fasten at perimeter edges only.
- H. Place corner bead with mesh at external wall corners; fasten at outer edges of lath only.
- I. Place strip lath diagonally at corners of lathed openings. Secure rigidly in place.
- J. Place strip lath centered over junctions of dissimilar backing materials on same plane. Secure rigidly in place.
- K. Place base screeds at termination of plaster areas; secure rigidly in place.
  - 1. Install weep screeds at foundation. Install minimum 4 inches above earth or 2 inches above paved areas.
  - 2. To allow moisture to escape from a portland cement plaster (stucco) assembly, no sealant shall be placed at the bottom of the plaster termination.
- L. Place 4 inch wide strips of lath centered over junctions of dissimilar backing materials, and secure rigidly in place.
- M. Place lath vertically above each top corner and each side of door frames to 6 inches above ceiling line.
- N. Place casing beads at terminations of plaster finish. Butt and align ends, cope or miter at corners. Secure rigidly in place, maximum 12 inches on centers..
- O. Place additional strip mesh diagonally at corners of lathed openings. Secure rigidly in place.

### 3.7 FIELD QUALITY CONTROL

- A. Inspection: Notify Architect minimum 2 days prior to scratch coat for inspection of all in-place lath and accessories.

### 3.8 TOLERANCES

- A. Install accessories to lines and levels.
- B. Maximum Variation from True Lines and Levels: 1/8 inch in 10 feet.
- C. Maximum Variation from True Position: 1/8 inch.

**END OF SECTION**

**SECTION 09 24 00 - CEMENT PLASTERING**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Cement plastering.

**1.2 RELATED REQUIREMENTS**

- A. Section 07 25 00 - Weather Barriers: Weather barrier under exterior plaster.
- B. Section 09 22 36 - Lath: Lath, furring, beads, screeds, and joint accessories for plaster base.
- C. Section 09 90 00 - Exterior Painting: Finish paint over integral color plaster.

**1.3 REFERENCE STANDARDS**

- A. ASTM C150/C150M - Standard Specification for Portland Cement; 2018.
- B. ASTM C206 - Standard Specification for Finishing Hydrated Lime; 2014.
- C. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2018.
- D. ASTM C926 - Standard Specification for Application of Portland Cement-Based Plaster; 2018a.
- E. ASTM C932 - Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering; 2006 (Reapproved 2013).
- F. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2018c.
- G. CBC - Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment; Current Adopted Edition.
- H. TSIB (PAM) - Plaster Assemblies Manual, Technical Services Information Bureau; Current Edition.

**1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittals procedures.
- B. Product Data: Provide data on plaster materials and trim accessories.
- C. Evaluation Service Reports: Show compliance with specified requirements.

**1.5 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.

- B. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

## 1.6 FIELD CONDITIONS

- A. Exterior Plaster Work: Do not apply plaster when substrate or ambient air temperature is 40 degrees F or lower, or when temperature is expected to drop below 40 degrees F within 48 hours of application.

## PART 2 PRODUCTS

### 2.1 CEMENT PLASTER APPLICATIONS

- A. Lath Plaster Base: Metal lath.
  1. Plaster Type: Factory prepared plaster mix.
  2. Number of Coats: Three.
  3. First Coat: Apply to a nominal thickness of 3/8 inch.
  4. Second Coat: Apply to a nominal thickness of 3/8 inch.
  5. Leveling Coat: Apply to a nominal thickness of 1/32 to 1/16 inch.
  6. Finish: Acrylic.

### 2.2 FACTORY PREPARED CEMENT PLASTER

- A. Fire-Resistance Rating: Determined in accordance with test procedures in ASTM E119 and complying with the following:
  1. CBC, Section 2504.2.1 Wood furring strips (DSA & OSHPD 1& 4), 2507 Lathing and Plastering, 2511 Interior Plaster, and 2512 Exterior Plaster.
- B. Exterior Portland cement plaster system made of scratch and brown base coat, leveling coat with reinforcing mesh, and acrylic finish coat; install in accordance with ASTM C926.
  1. Provide weather resistive barrier as part of the system, by the same manufacturer.
  2. Manufacturer:
    - a. Omega Products International, Inc., Super Cement with crack isolation system.
    - b. Parex USA, Inc; Armourwall 300; with Krak-Shield:  
[www.parexusa.com/#sle](http://www.parexusa.com/#sle)
  3. Other Acceptable Manufacturers:
    - a. Omega Products International, Inc.; Super Cement with Crack Isolation System: [www.omega-products.com](http://www.omega-products.com).

- b. Parex USA, Inc; Armourwall 300; with Parex Krak-Shield  
[www.parexusa.com/#sle](http://www.parexusa.com/#sle)
- c. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Premixed One-Coat Base: Mixture of Type I Portland cement complying with ASTM C150/C150M, hydrated lime complying with ASTM C206 and/or ASTM C207, fibers and other approved ingredients; install in accordance with ASTM C926.
- D. Premixed Base Coats: Mixture of cement, aggregate, fibers, and proprietary admixtures for scratch and brown coats; install in accordance with ASTM C926.
- E. Primer: Acrylic, as recommended by coating manufacturer and compatible with plaster base coat.
- F. Premixed Finish Coating: Integrally colored, acrylic coating.
  - 1. Integral Color: From manufactures standard colors.

### 2.3 ACCESSORIES

- A. Lath: As specified in Section 09 22 36.
- B. Bonding Compound: Provide type recommended for bonding plaster to solid surfaces, complying with ASTM C932.
- C. Reinforcing Mesh: 4.5 oz/sq yd alkali-resistant mesh.
- D. Water Resistive Barrier: As specified in Section 07 25 00.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions are acceptable prior to starting this work.
- B. Verify lath is flat, secured to substrate, and joint and surface perimeter accessories are properly in place.
- C. Verify mechanical and electrical equipment and services located within areas to receive this work have been properly tested and approved.

### 3.2 PREPARATION

- A. Removal and Refinishing Existing Exterior Plaster Finish Coat: Sandblast existing exterior plaster walls to remove paint finish and finish coat plaster down to a level, workable surface.
  - 1. Sandblasted gouges due to over sandblasting, may require a leveling or skim brown coat mixture applied after wash down.

2. Wash down to remove dust and other loose particles.
  3. Follow with finish coat over dampened surfaces.
- B. Roughen smooth concrete surfaces and apply bonding compound in accordance with manufacturer's written installation instructions.

### 3.3 MIXING

- A. Mix only as much plaster as can be used prior to initial set.
- B. Mix materials dry, to uniform color and consistency, before adding water.
- C. Protect mixtures from frost or freezing temperatures, contamination, and excessive evaporation.

### 3.4 APPLICATION

- A. Apply plaster in accordance with manufacturer's written instructions and comply with ASTM C926.
- B. Base Coats:
1. Apply base coat(s) to fully embed lath and to specified thickness.
  2. Follow guidelines in ASTM C926 and manufacturer's written installation instructions for moist curing base coats and application of subsequent coats.
- C. Leveling Coat:
1. Apply leveling coat to specified thickness.
  2. Fully embed reinforcing mesh in leveling coat.
- D. Finish Coats:
1. Primer and Acrylic Coatings:
    - a. Remove surface contaminants such as dust and dirt without damaging substrate.
    - b. Apply primer in accordance with manufacturer's instructions.
    - c. Apply finish coating in number of coats and to thickness recommended by manufacturer.
    - d. Finish coat to match existing texture.
  2. Acrylic Finish Texture: Apply to a consistent finish; match existing texture & finish.
    - a. TSIB (PAM) Fine Sand.
    - b. OmegaFlex Fine
    - c. Parex 534 Sand Fine.

E. Finish Painting Overcoat: See Section 09 90 00 – Exterior Painting.

### 3.5 TOLERANCES

A. Maximum Variation from True Flatness: 1/4 inch in 10 feet.

### 3.6 REPAIR

A. Patching: Remove loose, damaged or defective plaster and replace with plaster of same composition; finish to match surrounding area.

B. Damaged Plaster:

1. Plaster Detached from Framing:

- a. Remove loose and broken plaster.
- b. Repair or replace damaged water-resistant backing and lath in compliance with specified standards.
- c. Remove finish coat from surrounding area in the same plane by sandblasting.
- d. Provide a scratch coat and a brown coat mixed with liquid bonding agent instead of water to the areas devoid of plaster.
- e. Provide a coat of liquid bonding agent to entire wall plane.
- f. Provide 1/8 inch thick finish coat to entire wall plane. Match existing texture and color.

2. Cracked Plaster 1/8 inch to 1/2 inch:

- a. Remove loose material from crack with a wire brush.
- b. Fill crack with slurry of stucco and liquid bonding agent.
- c. Provide a coat of liquid bonding agent to entire wall plane.
- d. Provide 1/8 inch thick finish coat to entire wall plane and match existing texture and color.

3. Cracks Larger than 1/2 inch - Painted:

- a. Remove loose material from crack with a wire brush.
- b. Fill crack with slurry of one part Portland cement to three parts masonry or stucco sand and liquid bonding agent to match existing texture of adjacent surface.
- c. Paint entire wall plane, color to match existing.
- d. Where patching of plaster over existing lath is feasible, fasten loose lath and install new lath with nails at 6 inch centers.
  - 1) Where metal is furnished, lap new lath 6 inches over existing and tie at 6 inch centers.
  - 2) Provide waterproof, air barrier, and vapor barrier as required, shingled into existing.

- e. Patching of Holes, Cracks, and Gouges:
- 1) Patch holes, cracks, gouges, missing sections, and other defects in existing improvements.
  - 2) For holes over 1 inch in size, cut small sections of lath and place in opening attached to existing material.
    - (a) Install 3 coats of plaster.
  - 3) For holes one inch and smaller, install bonding agent to existing surfaces and neatly fill hole with plaster, installing necessary coats to match adjacent surfaces, eliminate cracks and match existing surface texture.
  - 4) Cracks, gouges, and other defects shall be filled with plaster or spackle as required and neatly finished to match adjacent existing improvements.

END OF SECTION

**SECTION 09 29 00 - GYPSUM BOARD**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Gypsum Board Panels.
- B. Vertical wall gypsum board application.
- C. Taped and sanded joint treatment.
- D. Related Sections
  - 1. Section 09 24 00, Portland Cement Plaster.
  - 2. Section 09 90 00, Painting

**1.2 REFERENCE STANDARDS**

- A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.
- B. American Society for Testing and Materials (ASTM)
  - 1. ASTM C475 - Joint Compound and Joint Tape for Finishing Gypsum Board.
  - 2. ASTM C645 - Specification for Nonstructural Steel Framing Members.
  - 3. ASTM C754 - Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
  - 4. ASTM C840 - Application and Finishing of Gypsum Board.
  - 5. ASTM C954 - Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. to 0.112 in. in thickness.
  - 6. ASTM C1002 - Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases.
  - 7. ASTM C1177 - Glass Mat Gypsum Substrate for Use as Sheathing.
  - 8. ASTM C1178 - Glass Mat Water-Resistant Gypsum Backing Panel.
  - 9. ASTM C1396 - Specification for Gypsum Board.
- C. Underwriters Laboratories, Inc. (UL)
  - 1. UL Directory - Fire Resistance Directory, Volume 1, Latest Edition.
- D. Gypsum Association (GA)
  - 1. GA-201 - Gypsum Board for Walls and Ceilings

2. GA-214 - Levels of Gypsum Board Finish
  3. GA-216 - Application and Finishing of Gypsum Board
  4. GA-600 - Fire Resistance Design Manual
  5. GA-226 - Gypsum Board installation on Curved Walls.
- E. 2016 California Building Code (CBC)
1. CBC-7 - Chapter 7, Fire Resistant Materials and Construction
  2. CBC-19A - Chapter 19A, Concrete (for DSA)
  3. CBC-25 - Chapter 25, Gypsum Board and Plaster.
- F. California Green Building Standards Code, CALGreen - 2019.

### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. CALGreen Submittals:
1. Product Data Sheets and Declaration Statements showing compliance with CALGreen Code, per paragraph 1.04.B this Section.

### 1.4 QUALITY ASSURANCE

- A. Applicator: Company specializing in gypsum board systems work with three years' experience.
- B. California Green Building Standards Code, CALGreen - 2019.
1. Adhesives, sealants, primers and caulks shall comply with air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, per CALGreen Tables 5.504.4.1 and 5.504.4.2.
  2. Paints and Coatings shall comply with VOC limits in Table 1 of the ARB, per CALGreen Table 5.504.4.3
  3. Composite wood products (plywood, particle board, medium density fiberboard) shall comply with Formaldehyde limits per CALGreen Table 5.504.4.5.
  4. Recycled Content per CALGreen Section A5.405.4.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack gypsum panels flat to prevent sagging.

- C. Steel Framing and related accessories shall be stored and handled in accordance with AISI Code of Standard Practice.

## 1.6 WARRANTY

- A. Provide manufacturer's warranty, 3 years against manufacturing defects.

## 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with ASTM C840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Products of following manufacturer form basis for design and quality intended:
  - 1. United States Gypsum Corporation (USG), Chicago, IL.
- B. Subject to compliance with requirements, other acceptable manufacturers include the following:
  - 1. Georgia-Pacific, Atlanta, GA.
  - 2. National Gypsum Co./Gold Bond Building Products, Charlotte, NC.
  - 3. Pabco Gypsum, Rancho Cordova, CA.
  - 4. CertainTeed Corporation, Valley Forge, PA.
  - 5. Temple-Inland Forest Products, Diboll, TX.
- C. Or equal as approved in accordance with Division 01, General Requirements for Substitutions.

### 2.2 BOARD MATERIALS

- A. Regular Gypsum Board: ASTM C1396; 5/8 inch thick, maximum permissible length; ends square cut, tapered round edges, USG SHEETROCK BRAND TAPERED GYPSUM PANELS SW.
- B. Fire-rated Gypsum Board, 1HR: ASTM C1396; Type X, fire resistive type, 5/8 inch thick, maximum permissible length; ends square cut, tapered round edges, USG SHEETROCK BRAND FIRECODE, or equal.

### 2.3 MATERIALS

- A. Taping, Bedding and Finishing Compound: ASTM C475; compatible with tape and substrate.
  - 1. USG SHEETROCK Brand Taping Joint Compound Ready-Mixed, drying-type, non-asbestos, vinyl base.

2. USG SHEETROCK Brand Topping Joint Compound Ready-Mixed, drying-type non-asbestos, vinyl base.
  3. USG SHEETROCK Powder Joint Compound, drying-type, non-asbestos vinyl base, conventionally drying. For Taping and Topping.
  4. USG SHEETROCK Powder Setting-type Joint Compound, chemical hardening.
  5. Contractor's Option: USG SHEETROCK Lightweight All Purpose Joint Compound (Plus 3) with Dust Control.
  6. USG SHEETROCK Brand All Purpose Joint Compound Ready-Mixed for laminating gypsum panels in multilayer partitions.
  7. USG SHEETROCK Brand Joint Tape-Heavy, ASTM C475, high strength cross-fibered paper tape.
  8. Drywall Primers: USG First Coat.
  9. Or equal as approved in accordance with Division 01, General Requirements for substitutions.
- B. Accessories: Corrosive Protective-Coated steel.
1. U-Trims: USG, Dietrich No. 200-A for joint compound or equal. .
  2. J-Trim Casings, reveal type: USG, Dietrich No. 401 for 1/2" panels, 402 for 5/8" panels, no finishing compound.
  3. Control Joint: Dietrich 093, USG Control Joint No. 093, Zinc metal.
  4. Corner Bead: USG, Dietrich No. 103 for joint compounds or equal.
- C. Fasteners: Self-drilling tapping screws shall comply ASTM C 954; Self piercing screws shall comply ASTM C 1002;
1. ASTM C1002, No. 2 Phillips recessed, bugle head, power-driven. Nails not permitted.
  2. Type S-12, ASTM C954, 16 gage steel studs, minimum penetration 3/8 inch.
  3. Type S, ASTM C 1002, 20 gage steel studs, minimum penetration 3/8 inch.
  4. Type G, gypsum board to gypsum board, minimum penetration 1/2 inch.
  5. Type W, wood construction, minimum penetration 5/8 inch. I. 2 3

## 2.4 TEXTURE FINISHES

- A. USG Spray Texture Finish: Match existing finishes unless noted otherwise.
- B. Primer as recommended by texture finish manufacturer.

### PART 3 - EXECUTION

#### 3.1 INSPECTION

- A. Verify that site conditions are ready to receive Work.
- B. Beginning installation means acceptance of substrate.

#### 3.2 PREPARATION

- A. Delivery and Storage: Arrange for an adequate supply of materials on the jobsite so that progress of Work will be uninterrupted. Materials and accessories shall be delivered in original containers and bundles, and identified with the manufacturer's name and brand. Store gypsum board on flat, solid supports in dry areas, well protected from the elements.
- B. Provide fixtures, anchors, sleeves, inserts and miscellaneous items, and provide openings and chases as necessary. Prior to closing in and finishing of dry wall Work, ascertain that piping, conduit, ductwork and fixtures which are to be concealed and which penetrate gypsum boards are in place, tested and approved.
- C. Scaffolding: Construct, erect and maintain in conformance with applicable laws and ordinances.
- D. Protection, Patching and Cleaning: Adjacent surfaces of other materials shall be protected from damage. Dry wall surfaces that have been cut out shall be neatly patched. Damaged or defective gypsum board finish shall be replaced. During progress of Work, rubbish droppings and water materials shall be removed.
- E. Fire Protection: Where required, the Work shall comply with the requirements for the protection rating indicated in the governing building code.
- F. Fire Sprinkler System: In areas where sprinkler heads occur, exercise care when installing drywall work. Do not damage or obstruct the heads in any way.
- G. Light Fixture Support:
  - 1. Recessed or drop-in light fixtures shall be supported directly by main runners or by supplemental framing which is supported by main runners.
  - 2. Surface mounted fixtures shall be attached to a main runner with a positive clamping device made of minimum 14 gauge metal. Rotational spring catches not allowed.
  - 3. Light fixtures shall be attached to ceiling to resist horizontal force equal to weight of fixtures.
  - 4. Install firestopping envelopes around recessed light fixtures and other electrical

devices or boxes that exceed 100 sq. inches in 100 sq. ft where required to maintain designated fire rating of ceiling assembly.

- H. Furring Channel Spacing: Furring channels at drywall ceilings shall be spaced at 16 inches on centers maximum.

### 3.4 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with ASTM C840, GA 201, GA 216 and Section 2508 California Building Code. Conform to DSA, IR 25-3. Use board types as indicated; if not indicated use board types as follows.
  - 1. Use Type X (fire-rated core) drywall unless indicated otherwise.
  - 2. Where gypsum wallboard is indicated as base for ceramic tile use board types as follows
    - a. Use Type (moisture resistant) board, except as follows
    - b. At walls to which plumbing fixtures are mounted and portions of adjoining walls within 2'-0" of a plumbing fixture, install fiberglass-mat faced tile backer board to 4'-0" above the finished floor with Type WR, above, moisture and mold resistant gypsum board.
- B. Non-rated: Erect single layer gypsum board parallel or perpendicular on vertical framing, attached to studs and framing members with the specified fasteners spaced at 16" on center with screws and at top and bottom, 12" on center with screws at ceilings. Solid backing not required at joints running perpendicular to studs and framing members for walls.
  - 1. For walls requiring STC 50 or higher, install extra layer of 1/2" gypsum board on one side, unless noted otherwise on wall schedule.
- C. Rated: Erect single or double layer fire-rated gypsum board panels in accordance with Table 705.4, Note a, and Section 708 California Building Code, and GA-600, for one-hour or two hour, fire-rated, non-bearing Fire Walls or Fire Partitions, steel or wood stud construction.
  - 1. Gypsum board panels installed parallel to vertical studs or framing shall be spaced at 8" on center with screws at vertical edges, and 12" on center with screws in field and at top and bottom, and 12" on center with screws at ceilings. Solid backing not required at joints running perpendicular to studs and framing members for walls. Stagger vertical joints 24 inches on centers each side and opposite sides. Where joints are not staggered required minimum 24 inches, solid backing shall be provided. All joints shall be treated except as provided herein.
  - 2. For walls requiring STC 50 or higher, install extra layer of 1/2" gypsum board on one side, unless noted otherwise on wall schedule.
- D. Treat cut edges and holes in moisture-resistant gypsum board with sealant.

- E. Place control joints consistent with lines of building spaces as indicated or at maximum of 30 ft on centers. At rated walls, provide with fire rated panels same as wall construction.
- F. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
- G. Seal all cutout and penetrations: For electrical, mechanical, plumbing and structural framing cutouts and penetration at interior surfaces. Per Section 07 92 00 for non-rated wall, and fire-rated sealant for rated walls per section 07 84 00.
- H. Foil-backed gypsum board shall be applied on the inside of exterior walls.
- I. Install reveal moldings according to manufacturer's recommendations.

### 3.5 JOINT TREATMENT

- A. Exposed gypsum board in wall areas and ceiling areas shall have joint compound and be taped and sanded per requirements of GA-114 for levels specified and ready for paint.
- B. On installations where two layers of gypsum board are required, only the face layer will require finishing of joints and screwheads.
- C. Gypsum wallboard joints in walls may either be exposed or covered with joint tape and joint compound for the portion of the wall above a suspended ceiling, which is part of a fire resistive floor-ceiling or roof-ceiling assembly, as listed in U.L. Fire Resistive Ratings (BXUV), when the following conditions are met:
  - 1. Vertical joints occur over framing members.
  - 2. Horizontal joints are staggered 24 inches on opposite sides or covered with 6 inch wide strips of gypsum board attached with 1-1/2 inch laminating screws at 8 inches on centers.
  - 3. Partition is two-ply system with joints staggered 16 inches or 24 inches.
  - 4. Partition is not part of a smoke or sound control system.
- D. Fire-Rated Partitions: Perimeters of fire-rated partitions shall be caulked with fire-rated sealant as specified in Section 07 84 00, both sides of partition.
- E. Sound-Rated Partitions: Perimeters and penetrations of sound-rated partitions shall be caulked with acoustical sealant as specified in Section 07 92 00, both sides of partition.
- F. Joints, except where excluded above including internal corners, shall be filled and taped. Thin uniform layer of joint compound, approximately 3 inches wide, shall be applied over joint. Tape shall be set in joint compound and finish levels required below. Internal angles, both horizontal and vertical, shall be reinforced and with tape folded to form straight and true angle. Metal external corners shall be set in place.

Joints shall be allowed to dry at least 24 hours between each application of cement.

- G. Gypsum board finish shall be to the following levels as defined by GA-214:
1. Plenum areas above ceilings - Level 1.
  2. Substrate for tile, tackable wall panels, tackboards and markerboards - Level 2.
  3. Areas receiving heavy textured paint - Level 3.
  4. Areas receiving vinyl wall covering, high impact wall covering, texture finish or light textured flat paint - Level 4.
  5. All Areas receiving Wall Coverings, non-textured, flat, egg-shell, gloss or semi-gloss paint - Level 5. Backroll application of sealer. Level 5 requires one of the following.
    - a. Skim coat: A thin skim coat of joint compound, or a material manufactured especially for this purpose, shall be applied to entire surfaces. Surfaces shall be smooth and free of tool marks and ridges.
    - b. Acrylic latex-based coating, spray apply: USG SHEETROCK Brand Primer-Surfacer Tuf-Hide or ProForm Surfacer/Primer by National Gypsum or equal. Apply to 15-20 mils wet film thickness to entire surface.
    - c. "Smooth Coat" level 5 by Westpac Materials, Orange, CA.
    - d. Additionally apply primer coat per Section 09 90 00 Painting.

### 3.6 TEXTURED FINISHES

- A. Spray apply textured finishes to interior gypsum board where scheduled on drawings.
- B. Texture coat shall provide a uniform splatter pattern finish with an 80 percent minimum coverage of surface.
- C. Utilized special equipment intended for specified texture finish.
- D. Provide protection from spray for interior surfaces of electrical boxes and wiring.

### 3.7 TOLERANCES

- A. Maximum Variation from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

SECTION 09 65 13 – RESILIENT BASE AND ACCESSORIES

GENERAL - PART 1

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
  - 1. Thermoset-rubber base.
  - 2. Rubber molding accessories.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified, not less than 12 inches long.
- C. Samples for Initial Selection: For each type of product indicated.
- D. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches long.
- E. Product Schedule: For resilient base and accessory products. Use same designations indicated on Drawings.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials[, from the same product run,] that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Furnish not less than 10 linear feet (3 linear m) for every 500 linear feet (150 linear m) or fraction thereof, of each type, color, pattern, and size of resilient product installed.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1.6 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C) in spaces to receive resilient products during the following periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C).
- C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Products shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.2 THERMOSET-RUBBER BASE <Insert drawing designation>

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
  - 1. Burke Corporation, USA.
- B. Product Standard: ASTM F1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).
- C. Thickness: 0.125 inch.
- D. Height: 4 inches.
- E. Lengths: Coils in manufacturer's standard length.

- F. Coordinate "Outside Corners" and "Inside Corners" paragraphs below with "Resilient Base Installation" Article.
- G. Outside Corners: Job formed.
- H. Inside Corners: Job formed
- I. Colors: 123 Charcoal

### 2.3 RUBBER MOLDING ACCESSORY

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
  - 1. Burke Corporation, USA
- B. Description: Rubber carpet edge for glue-down applications, nosing for carpet, nosing for resilient floor covering, reducer strip for resilient floor covering, transition strips.
- C. Profile and Dimensions: Standard TOE, 4-inch.
- D. Locations: Provide rubber molding accessories in areas indicated,
- E. Colors and Patterns: Per drawings and schedules.

### 2.4 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.
  - 1. Adhesives shall have a VOC content of [50] > g/L or less[ and 60 g/L or less for rubber stair treads].
- C. Metal Edge Strips: Extruded aluminum with mill finish, nominal 2 inches wide, of height required to protect exposed edges of flooring, and in maximum available lengths to minimize running joints.
- D. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient stair-tread manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
  - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Installation of resilient products indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- C. Do not install resilient products until materials are the same temperature as space where they are to be installed.
  - 1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.
- D. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

### 3.3 RESILIENT BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.
- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.

- F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- G. Preformed Corners: Install preformed corners before installing straight pieces.
- H. Job-Formed Corners:
  - 1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches (in length).
    - a. Form without producing discoloration (whitening) at bends.
  - 2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.
    - a. Miter corners to minimize open joints.

### **3.4 RESILIENT ACCESSORY INSTALLATION**

- A. Comply with manufacturer's written instructions for installing resilient accessories.
- B. Resilient Stair Accessories:
  - 1. Use stair-tread-nose filler to fill nosing substrates that do not conform to tread contours.
  - 2. Tightly adhere to substrates throughout length of each piece.
  - 3. For treads installed as separate, equal-length units, install to produce a flush joint between units.
- C. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

### **3.5 CLEANING AND PROTECTION**

- A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.
- B. Perform the following operations immediately after completing resilient-product installation:
  - 1. Remove adhesive and other blemishes from surfaces.
  - 2. Sweep and vacuum horizontal surfaces thoroughly.
  - 3. Damp-mop horizontal surfaces to remove marks and soil.

**SECTION 09 65 13  
RESILIENT BASE AND ACCESSORIES**

- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

**END OF SECTION**

SECTION 09 65 19 – RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. Flooring and accessories as shown on the drawings and schedules and as indicated by the requirements of this section.
- B. Related Documents:
  - 1. Drawings and General Provisions of the Contract (including General and Supplementary Conditions and Division 1 sections) apply to the work of this section.
- C. Related Sections:
  - 1. Other Division 9 sections for floor finishes related to this section but not the work of this section.
  - 2. Division 3 Concrete; not the work of this section.
  - 3. Division 6 Wood and Plastics; not the work of this section.
  - 4. Division 7 Thermal and Moisture Protection; not the work of this section.

1.2 REFERENCES

- A. Armstrong Flooring Technical Manuals.
  - 1. Armstrong Flooring Guaranteed Installation Systems manual, F-5061
  - 2. Armstrong Flooring Maintenance Recommendations and Procedures, manual, F-8663.
- B. ASTM International:
  - 1. ASTM E 648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
  - 2. ASTM E 662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
  - 3. ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
  - 4. ASTM F 1066 Standard Specification for Vinyl Composition Tile
  - 5. ASTM F 1482, Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring
  - 6. ASTM F 1861 Standard Specification for Resilient Wall Base

- 7. ASTM F 1869 Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- 8. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- C. National Fire Protection Association (NFPA):
  - 1. NFPA 253 Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
  - 2. NFPA 258 Standard Test Method for Measuring the Smoke Generated by Solid Materials
- D. Canadian Standards
  - 1. CAN/ULC-S102.2 Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies

### **1.3 SYSTEM DESCRIPTION**

- A. Performance Requirements: Provide flooring which has been manufactured, fabricated and installed to performance criteria certified by manufacturer without defects, damage, or failure.
- B. Test Installations/ Mock-ups: Install at the project site a job mock-up using acceptable products and manufacturer approved installation methods, including concrete substrate testing. Obtain Owner's and Consultant's acceptance of finish color, texture and pattern, and workmanship standards.
  - 1. Mock-Up Size: [Specify mock-up size.]
  - 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
  - 3. Incorporation: Mock-up may be incorporated into the final construction with Owner's approval.
- C. Sequencing and Scheduling
  - 1. Install flooring and accessories after the other finishing operations, including painting, have been completed. Close spaces to traffic during the installation of the flooring.
  - 2. Do not install flooring over concrete slabs until they are sufficiently dry to achieve a bond with the adhesive, in accordance with the manufacturer's recommended bond, moisture tests and pH test.

### **1.4 SUBMITTALS**

- A. Closeout Submittals: Submit the following:
  - 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and

Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.

2. Warranty: Warranty documents specified herein

## 1.5 QUALITY ASSURANCE

- A. Single-Source Responsibility: provide types of flooring and accessories supplied by one manufacturer, including moisture mitigation systems, primers, leveling and patching compounds, and adhesives.
- B. Select an installer who is experienced and competent in the installation of Armstrong resilient vinyl composition tile flooring and the use of Armstrong Flooring subfloor preparation products.
  1. Engage installers certified as Armstrong Commercial Flooring Certified Installers
  2. Confirm installer's certification by requesting their credentials
- C. Fire Performance Characteristics: Provide resilient vinyl composition tile flooring with the following fire performance characteristics as determined by testing material in accordance with ASTM test methods indicated below by a certified testing laboratory or other testing agency acceptable to authorities having jurisdiction:
  1. ASTM E 648 Critical Radiant Flux of 0.45 watts per sq. cm. or greater, Class I
  2. ASTM E 662 (Smoke Generation) Maximum Specific Optical Density of 450 or less
  3. CAN/ULC-S102.2 – Flame Spread Rating and Smoke Developed – Results as tested.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Comply with Division 01 Product Requirements Sections
- B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Deliver materials in good condition to the jobsite in the manufacturer's original unopened containers that bear the name and brand of the manufacturer, project identification, and shipping and handling instructions.
- D. Store materials in a clean, dry, enclosed space off the ground, protected from harmful weather conditions and at temperature and humidity conditions recommended by the manufacturer. Protect adhesives from freezing. Store flooring, adhesives and accessories in the spaces where they will be installed for at least 48 hours before beginning installation.

## 1.7 PROJECT CONDITIONS

- A. Maintain a minimum temperature in the spaces to receive the flooring and accessories of 65°F (18°C) and a maximum temperature of [100°F (38°C)][85°F (29°C)] for at least 48 hours before, during, and for not less than 48 hours after installation. Thereafter, maintain a minimum temperature of 55°F (13°C) in areas where work is completed. Protect all materials from the direct flow of heat from hot-air registers, radiators, or other heating

fixtures and appliances. Refer to the Armstrong Flooring Guaranteed Installations Systems manual, F-5061 for a complete guide on project conditions.

#### 1.8 LIMITED WARRANTY

- A. Resilient Flooring: Submit a written warranty executed by the manufacturer, agreeing to repair or replace resilient flooring that fails within the warranty period.
- B. Limited Warranty Period: 5 years
- C. Limited Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.
- D. For the Limited Warranty to be valid, this product is required to be installed using the appropriate Armstrong Flooring Guaranteed Installation System. Product installed not using the specific instructions from the Guaranteed Installation System will void the warranty.

#### 1.9 EXTENDED SYSTEM LIMITED WARRANTY

- A. Resilient Flooring System: Submit a written warranty executed by the manufacturer, agreeing to repair or replace system (subfloor preparation products, adhesive, and floor covering) that fails within the warranty period.
- B. Limited Warranty Period: 10 years on top of the Resilient Flooring Limited Warranty
- C. [S-453 Level Strong™ cement based self-leveling compound] [S-456 Patch Strong™ flexible patching and smoothing compound] [S-454 Prime Strong™ acrylic primer for porous substrates] [S-455 Prime Strong™ acrylic primer for non-porous substrates] [S-452 Seal Strong™ two part moisture mitigation system]
- D. The installation of an Armstrong Flooring product along with the recommended Armstrong Flooring adhesive, as well as any one of the Strong System subfloor preparation products listed above, provides 10 additional years of limited warranty coverage. The Strong System limited warranty covers the installation integrity for the length of the flooring product warranty plus 10 years. In order to qualify for the Strong System Warranty, any subfloor preparation product needed for an installation must be an Armstrong Flooring product.
- E. For the System Limited Warranty to be valid, this product is required to be installed using the appropriate Armstrong Flooring Guaranteed Installation System. Product installed not using the specific instructions from the Guaranteed Installation System will void the warranty.
- F. When Armstrong Flooring Strong System subfloor preparation products are used with other manufacturers' floor coverings, adhesives, or other subfloor preparation products, Armstrong Flooring warrants our products to be free from manufacturing defects from the date of purchase through the limited warranty period of 15 years.

#### 1.10 MAINTENANCE

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials from same production run as products installed. Packaged with protective covering for storage and identified with appropriate labels.

1. Quantity: Furnish quantity of flooring units equal to [ ] % of amount installed.
2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra material.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. Resilient tile flooring, wall base, adhesives and subfloor preparation products and accessories:

Armstrong Flooring Inc., 2500 Columbia Avenue, Lancaster, PA 17604,  
[www.armstrongflooring.com/commercial](http://www.armstrongflooring.com/commercial)

1. Manufacturer must have a headquarters in the United States of America
- B. Substitution per Division 01.

### 2.2 RESILIENT TILE FLOORING MATERIALS

- A. Provide Vinyl Composition Tile: Standard Excelon® [Imperial® Texture][Multicolor™] Tile Flooring manufactured by Armstrong Flooring, Inc.
1. Description: Tile composed of polyvinyl chloride resin, plasticizers, fillers, stabilizers and pigments with colors and texture dispersed uniformly throughout its entire thickness.
  2. Vinyl composition tile shall conform to the requirements of ASTM F 1066, "Standard Specification Vinyl Composition Floor Tile", Class 2, through-pattern
  3. Pattern and Color: in [%COLOR%] [color selected from the range currently available from Armstrong Flooring, Inc.]
  4. Size: 12 in. x 12 in.
  5. Thickness: [1/8"/0.125 in.] [3/32"/0.095 in.]

### 2.3 ADHESIVES

- A. For Tile Installation System, Full Spread: Provide Armstrong [S-515 Floor Tile Adhesive] [S-525 BBT® Bio-Flooring Adhesive] [S-700 Floor Tile Adhesive Thin Spread] [S-750 Premium Floor Tile Adhesive] under the tile and Armstrong S-725 Wall Base Adhesive at the wall base as recommended by the flooring manufacturer.

### 2.6 ACCESSORIES

- A. For patching, smoothing, and leveling monolithic subfloors (concrete, terrazzo, quarry tile, ceramic tile, and certain metals), provide Armstrong [S-184 Fast-Setting Cement-Based Patch and Underlayment] [S-194 Cement-Based Patch, Underlayment and Embossing

Leveler / S-195 Underlayment Additive] [S-453 Level Strong™ cement based self-leveling compound] [S-456 Patch Strong™ flexible patching and smoothing compound].

- B. [For priming porous substrates to aid in adhesive bond strength and reducing subfloor porosity, provide S-454 Prime Strong™ acrylic primer for porous substrates. For non-porous substrates, provide S-455 Prime Strong™ acrylic primer for non-porous substrates].
- C. [For creating a moisture barrier, provide S-452 Seal Strong™ two part moisture mitigation system].
- D. For sealing joints between the top of wall base or integral cove cap and irregular wall surfaces such as masonry, provide plastic filler applied according to the manufacturer's recommendations.
- E. Provide transition/reducing strips tapered to meet abutting materials.
- F. Provide threshold of thickness and width as shown on the drawings.
- G. Provide resilient edge strips of width shown on the drawings, of equal gauge to the flooring, homogeneous vinyl or rubber composition, tapered or bullnose edge, with color to match or contrast with the flooring, or as selected by the Architect from standard colors available.
- H. Provide metal edge strips of width shown on the drawings and of required thickness to protect exposed edges of the flooring. Provide units of maximum available length to minimize the number of joints. Use butt-type metal edge strips for concealed anchorage, or overlap-type metal edge strips for exposed anchorage. Unless otherwise shown, provide strips made of extruded aluminum with a mill finish.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions (i.e. moisture tests, bond test, pH test, etc.).
- B. Visually inspect flooring materials, adhesives and accessories prior to installation. Flooring material with visual defects shall not be installed and shall not be considered as a legitimate claim.
- C. Examine subfloors prior to installation to determine that surfaces are smooth and free from cracks, holes, ridges, and other defects that might prevent adhesive bond or impair durability or appearance of the flooring material.
- D. Inspect subfloors prior to installation to determine that surfaces are free from curing, sealing, parting and hardening compounds; residual adhesives; adhesive removers; and other foreign materials that might prevent adhesive bond. Visually inspect for evidence of moisture, alkaline salts, carbonation, dusting, mold, or mildew.
- E. Report conditions contrary to contract requirements that would prevent a proper installation. Do not proceed with the installation until unsatisfactory conditions have been corrected.
- F. Failure to call attention to defects or imperfections will be construed as acceptance and approval of the subfloor. Installation indicates acceptance of substrates with regard to conditions existing at the time of installation.

### 3.3 PREPARATION

- A. Subfloor Cleaning: The surface shall be free of dust, solvents, varnish, paint, wax, oil, grease, sealers, release agents, curing compounds, residual adhesive, adhesive removers and other foreign materials that might affect the adhesion of resilient flooring to the concrete or cause a discoloration of the flooring from below. Remove residual adhesives as recommended by the flooring manufacturer. Remove curing and hardening compounds not compatible with the adhesives used, as indicated by a bond test or by the compound manufacturer's recommendations for flooring. Avoid organic solvents. Spray paints, permanent markers and other indelible ink markers must not be used to write on the back of the flooring material or used to mark the concrete slab as they could bleed through, telegraphing up to the surface and permanently staining the flooring material. If these contaminants are present on the substrate they must be mechanically removed prior to the installation of the flooring material.. Refer to the Armstrong Flooring Guaranteed Installation Systems manual, F-5061 and ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring for additional information on subfloor preparation.

### 3.4 INSTALLATION OF FLOORING

- A. Install flooring in strict accordance with the latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061. Failure to comply may result in voiding the manufacturer's warranty listed in Section 1.08.
- B. Install flooring wall to wall before the installation of floor-set cabinets, casework, furniture, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets, and similar openings as shown on the drawings.
- C. Scribe, cut, and fit to permanent fixtures, columns, walls, partitions, pipes, outlets, and built-in furniture and cabinets.
- D. Install flooring with adhesives, tools, and procedures in strict accordance with the manufacturer's written instructions. Observe the recommended adhesive trowel notching, open times, and working times.

### 3.5 INSTALLATION OF ACCESSORIES

- A. Apply top set wall base to walls, columns, casework, and other permanent fixtures in areas where top-set base is required. Install base in lengths as long as practical, with inside corners fabricated from base materials that are mitered or coped. Tightly bond base to vertical substrate with continuous contact at horizontal and vertical surfaces.
- B. Fill voids with plastic filler along the top edge of the resilient wall base or integral cove cap on masonry surfaces or other similar irregular substrates.
- C. Place resilient edge strips tightly butted to flooring, and secure with adhesive recommended by the edge strip manufacturer. Install edge strips at edges of flooring that would otherwise be exposed.
- D. Apply [butt-type] [overlap] metal edge strips where shown on the drawings, [before] [after] flooring installation. Secure units to the substrate, complying with the edge strip manufacturer's recommendations.

3.6 CLEANING

- A. Perform initial and on-going maintenance according to the latest edition of the maintenance recommendations for Standard Excelon Imperial Texture.

3.7 PROTECTION

- A. Protect installed flooring as recommended by the flooring manufacturer against damage from rolling loads, other trades, or the placement of fixtures and furnishings. (See Finishing The Job in the latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061.)

END OF SECTION

SECTION 09 65 36 - STATIC DISSIPATIVE RESILIENT FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. Flooring and accessories as shown on the drawings and schedules and as indicated by the requirements of this section.
- B. Related Documents
  - 1. Drawings and General Provisions of the Contract (including General and Supplementary Conditions and Division 1 sections) apply to the work of this section.
  - 2. Other Division 9 sections for floor finishes related to this section but not the work of this section
  - 3. Division 3 Concrete; not the work of this section
  - 4. Division 6 Wood and Plastics; not the work of this section
  - 5. Division 7 Thermal and Moisture Protection; not the work of this section

1.2 REFERENCES

- A. Armstrong Flooring Technical Manuals
  - 1. Armstrong Flooring Guaranteed Installation Systems manual, F-5061
  - 2. Armstrong Flooring Maintenance Recommendations and Procedures, manual, F-8663
- B. ASTM International:
  - 1. ASTM E 648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
  - 2. ASTM E 662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
  - 3. ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
  - 4. ASTM F 1066 Standard Specification for Vinyl Composition Tile
  - 5. ASTM F 1482, Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring
  - 6. ASTM F 1861 Standard Specification for Resilient Wall Base
  - 7. ASTM F 1869 Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

8. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- C. National Fire Protection Association (NFPA):
  1. NFPA 253 Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
  2. NFPA 258 Standard Test Method for Measuring the Smoke Generated by Solid Materials
- D. ANSI/ESD Standards
  1. ANSI/ESD STM 7.1 :Floor Materials—Resistive Characterization of Materials
  2. ANSI/ESD STM 97.1: Floor Materials and Footwear—Resistance in Combination with a Person
  3. ANSI/ESD STM 97.2: Floor Materials and Footwear Voltage Measurement in Combination with a Person

### **1.3 SYSTEM DESCRIPTION**

- A. Performance Requirements: Provide flooring which has been manufactured, fabricated and installed to performance criteria certified by manufacturer without defects, damage, or failure.
- B. Test Installations/ Mock-ups: Install at the project site a job mock-up using acceptable products and manufacturer approved installation methods, including concrete substrate testing. Obtain Owner's and Consultant's acceptance of finish color, texture and pattern, and workmanship standards.
  1. Mock-Up Size: [Specify mock-up size.]
  2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
  3. Incorporation: Mock-up may be incorporated into the final construction with Owner's approval.
- C. Sequencing and Scheduling
  1. Install flooring and accessories after the other finishing operations, including painting, have been completed. Close spaces to traffic during the installation of the flooring.
  2. Do not install flooring over concrete slabs until they are sufficiently dry to achieve a bond with the adhesive, in accordance with the manufacturer's recommended bond, moisture tests and pH test.

### **1.4 SUBMITTALS**

- A. Submit the manufacturer's standard samples showing the required colors for flooring and applicable accessories.

- B. Closeout Submittals: Submit the following:
  - 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
  - 2. Warranty: Warranty documents specified herein

## 1.5 QUALITY ASSURANCE

- A. Single-Source Responsibility: provide types of flooring and accessories supplied by one manufacturer, including moisture mitigation systems, primers, leveling and patching compounds, and adhesives.
- B. Select an installer who is experienced and competent in the installation of Armstrong resilient static dissipative vinyl composition tile flooring and the use of Armstrong Flooring subfloor preparation products.
  - 1. Engage installers certified as Armstrong Commercial Flooring Certified Installers
  - 2. Confirm installer's certification by requesting their credentials
- C. Fire Performance Characteristics: Provide resilient vinyl composition tile flooring with the following fire performance characteristics as determined by testing material in accordance with ASTM test methods indicated below by a certified testing laboratory or other testing agency acceptable to authorities having jurisdiction:
  - 1. ASTM E 648 Critical Radiant Flux of 0.45 watts per sq. cm. or greater, Class I
  - 2. ASTM E 662 (Smoke Generation) Maximum Specific Optical Density of 450 or less
  - 3. CAN/ULC-S102.2 – Flame Spread Rating and Smoke Developed – Results as tested.
- D. Provide flooring material to meet the following electrical properties when installed according to manufacturer's instructions with the required adhesive, copper strips and SDT floor finish:
  - 1. ANSI/ESD STM 7.1 Floor Materials—Resistive Characterization of Materials results between  $10^6$  and  $10^9$  ohms, point-to-point and point-to-ground.
  - 2. ASTM F 150 Electrical Resistance of Flooring between  $10^6$  and  $10^9$  ohms, point-to-point and point-to-ground.
  - 3. ANSI/ESD STM 97.1: Floor Materials and Footwear—Resistance in Combination with a Person results between  $10^6$  and  $10^9$  ohms (average) with dissipative footwear and when using heel straps.
  - 4. ANSI/ESD STM 97.2: Floor Materials and Footwear Voltage Measurement in Combination with a Person – 30 volts (average) with dissipative footwear at 12% relative humidity.
  - 5. Static Dissipation @ 12% RH: Flooring in combination with a person wearing dissipative footwear – 1000 to 100 volts: 0.2 seconds maximum.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Comply with Division 01, Product Requirements Sections
- B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Deliver materials in good condition to the jobsite in the manufacturer's original unopened containers that bear the name and brand of the manufacturer, project identification, and shipping and handling instructions.
- D. Store materials in a clean, dry, enclosed space off the ground, protected from harmful weather conditions and at temperature and humidity conditions recommended by the manufacturer. Protect adhesives from freezing. Store flooring, adhesives and accessories in the spaces where they will be installed for at least 48 hours before beginning installation.

## 1.7 PROJECT CONDITIONS

- A. Maintain a minimum temperature in the spaces to receive the flooring and accessories of 65°F (18°C) and a maximum temperature of 85°F (29°C) for at least 48 hours before, during, and for not less than 48 hours after installation. During the service life of the floor, the temperature should never rise above 100°F (38°C) nor fall below 55°F (13°C). The performance of the flooring material and adhesives can be adversely affected outside this temperature range. Protect all materials from the direct flow of heat from hot-air registers, radiators, or other heating fixtures and appliances. Refer to the [Armstrong Flooring Guaranteed Installations Systems](#) manual, F-5061 for a complete guide on project conditions.

## 1.8 LIMITED WARRANTY

- A. Resilient Flooring: Submit a written warranty executed by the manufacturer, agreeing to repair or replace resilient flooring that fails within the warranty period.
- B. Limited Warranty Period: 5 years
- C. Limited Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.
- D. For the Limited Warranty to be valid, this product is required to be installed using the appropriate Armstrong Flooring Guaranteed Installation System. Product installed not using the specific instructions from the Guaranteed Installation System will void the warranty.

## 1.9 EXTENDED SYSTEM LIMITED WARRANTY

- A. Resilient Flooring System: Submit a written warranty executed by the manufacturer, agreeing to repair or replace system (subfloor preparation products, adhesive, and floor covering) that fails within the warranty period.
- B. Limited Warranty Period: 10 years on top of the Resilient Flooring Limited Warranty
- C. [S-453 Level Strong™ cement based self-leveling compound] [S-456 Patch Strong™ flexible patching and smoothing compound] [S-454 Prime Strong™ acrylic primer for porous

substrates] [S-455 Prime Strong™ acrylic primer for non-porous substrates] [S-452 Seal Strong™ two part moisture mitigation system]

- D. The installation of an Armstrong Flooring product along with the recommended Armstrong Flooring adhesive, as well as any one of the Strong System subfloor preparation products listed above, provides 10 additional years of limited warranty coverage. The Strong System limited warranty covers the installation integrity for the length of the flooring product warranty plus 10 years. In order to qualify for the Strong System Warranty, any subfloor preparation product needed for an installation must be an Armstrong Flooring product.
- E. For the System Limited Warranty to be valid, this product is required to be installed using the appropriate Armstrong Flooring Guaranteed Installation System. Product installed not using the specific instructions from the Guaranteed Installation System will void the warranty.
- F. When Armstrong Flooring Strong System subfloor preparation products are used with other manufacturers' floor coverings, adhesives, or other subfloor preparation products, Armstrong Flooring warrants our products to be free from manufacturing defects from the date of purchase through the limited warranty period of 15 years.

#### 1.10 MAINTENANCE

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials from same production run as products installed. Packaged with protective covering for storage and identified with appropriate labels.
  - 1. Quantity: Furnish quantity of flooring units equal to [ ] % of amount installed.
  - 2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra material.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURER

- A. Resilient tile flooring, wall base, adhesives and subfloor preparation products and accessories:
  - 1. Armstrong Flooring Inc., 2500 Columbia Avenue, Lancaster, PA 17604, [www.armstrongflooring.com/commercial](http://www.armstrongflooring.com/commercial)
  - 2. Manufacturer must have a headquarters in the United States of America
  - 3. Substitutions per Division 01.

#### 2.2 RESILIENT TILE FLOORING MATERIALS

- A. Provide Excelon SDT™ Static Dissipative Tile Flooring manufactured by Armstrong Flooring Inc.

1. Description: Static dissipative vinyl tile composed of polyvinyl chloride resin, plasticizers, fillers, pigments, and antistatic additive with colors and texture dispersed uniformly throughout its thickness.
2. Tile shall meet size, thickness, indentation, impact, deflection, dimensional stability, resistance to chemicals, squareness, and resistance to heat requirements of ASTM F 1066 Standard Specification for Vinyl Composition Tile, Class 2, through pattern.
3. Pattern and Color: in [%COLOR%] [color selected from the range currently available from Armstrong Flooring, Inc.]
4. Size: 12 in. x 12 in.
5. Thickness: 1/8"/0.125 in.

### 2.3 ADHESIVES

- A. Provide Armstrong S-202 Static Dissipative Tile Adhesive with 2 in. (5.08 cm) wide x 24 in. (60.96 cm) long copper ground-connection strips for under the tile and Armstrong S-725 Wall Base Adhesive at the wall base as recommended by the flooring manufacturer.

### 2.4 ACCESSORIES

- A. Provide Armstrong S-392 Static Dissipative Tile Polish for application as initial and on-going static dissipative maintenance finish.
- B. For patching, smoothing, and leveling monolithic subfloors (concrete, terrazzo, quarry tile, ceramic tile, and certain metals), provide Armstrong [S-184 Fast-Setting Cement-Based Patch and Underlayment] [S-194 Cement-Based Patch, Underlayment and Embossing Leveler / S-195 Underlayment Additive] [S-453 Level Strong™ cement based self-leveling compound] [S-456 Patch Strong™ flexible patching and smoothing compound].
- C. [For priming porous substrates to aid in adhesive bond strength and reducing subfloor porosity, provide S-454 Prime Strong™ acrylic primer for porous substrates. For non-porous substrates, provide S-455 Prime Strong™ acrylic primer for non-porous substrates].
- D. [For creating a moisture barrier, provide S-452 Seal Strong™ two part moisture mitigation system].
- E. For sealing joints between the top of wall base or integral cove cap and irregular wall surfaces such as masonry, provide plastic filler applied according to the manufacturer's recommendations.
- F. Provide transition/reducing strips tapered to meet abutting materials.
- G. Provide threshold of thickness and width as shown on the drawings.
- H. Provide resilient edge strips of width shown on the drawings, of equal gauge to the flooring, homogeneous vinyl or rubber composition, tapered or bullnose edge, with color to match or contrast with the flooring, or as selected by the Architect from standard colors available.
- I. Provide metal edge strips of width shown on the drawings and of required thickness to protect exposed edges of the flooring. Provide units of maximum available length to minimize the number of joints. Use butt-type metal edge strips for concealed anchorage, or overlap-type metal edge strips for exposed anchorage. Unless otherwise shown, provide strips made of extruded aluminum with a mill finish.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions (i.e. moisture tests, bond test, pH test, etc.).
- B. Visually inspect flooring materials, adhesives and accessories prior to installation. Flooring material with visual defects shall not be installed and shall not be considered as a legitimate claim.
- C. Examine subfloors prior to installation to determine that surfaces are smooth and free from cracks, holes, ridges, and other defects that might prevent adhesive bond or impair durability or appearance of the flooring material.
- D. Inspect subfloors prior to installation to determine that surfaces are free from curing, sealing, parting and hardening compounds; residual adhesives; adhesive removers; and other foreign materials that might prevent adhesive bond. Visually inspect for evidence of moisture, alkaline salts, carbonation, dusting, mold, or mildew.
- E. Report conditions contrary to contract requirements that would prevent a proper installation. Do not proceed with the installation until unsatisfactory conditions have been corrected.
- F. Failure to call attention to defects or imperfections will be construed as acceptance and approval of the subfloor. Installation indicates acceptance of substrates with regard to conditions existing at the time of installation.

### 3.3 PREPARATION

- A. Subfloor Cleaning: The surface shall be free of dust, solvents, varnish, paint, wax, oil, grease, sealers, release agents, curing compounds, residual adhesive, adhesive removers and other foreign materials that might affect the adhesion of resilient flooring to the concrete or cause a discoloration of the flooring from below. Remove residual adhesives as recommended by the flooring manufacturer. Remove curing and hardening compounds not compatible with the adhesives used, as indicated by a bond test or by the compound manufacturer's recommendations for flooring. Avoid organic solvents. Spray paints, permanent markers and other indelible ink markers must not be used to write on the back of the flooring material or used to mark the concrete slab as they could bleed through, telegraphing up to the surface and permanently staining the flooring material. If these contaminants are present on the substrate they must be mechanically removed prior to the installation of the flooring material. Refer to the Armstrong Flooring Guaranteed Installation Systems manual, F-5061 and ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring for additional information on subfloor preparation.

### 3.4 INSTALLATION OF FLOORING

- A. Install flooring in strict accordance with the latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061. Failure to comply may result in voiding the manufacturer's warranty listed in Section 1.08.
- B. Install flooring wall to wall before the installation of floor-set cabinets, casework, furniture, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets, and similar openings as shown on the drawings.
- C. Scribe, cut, and fit to permanent fixtures, columns, walls, partitions, pipes, outlets, and built-in furniture and cabinets.
- D. Install flooring with adhesives, tools, and procedures in strict accordance with the manufacturer's written instructions. Observe the recommended adhesive trowel notching, open times, and working times.

### 3.5 INSTALLATION OF ACCESSORIES

- A. Apply top set wall base to walls, columns, casework, and other permanent fixtures in areas where top-set base is required. Install base in lengths as long as practical, with inside corners fabricated from base materials that are mitered or coped. Tightly bond base to vertical substrate with continuous contact at horizontal and vertical surfaces.
- B. Fill voids with plastic filler along the top edge of the resilient wall base or integral cove cap on masonry surfaces or other similar irregular substrates.
- C. Place resilient edge strips tightly butted to flooring, and secure with adhesive recommended by the edge strip manufacturer. Install edge strips at edges of flooring that would otherwise be exposed.
- D. Apply [butt-type] [overlap] metal edge strips where shown on the drawings, [before] [after] flooring installation. Secure units to the substrate, complying with the edge strip manufacturer's recommendations.

### 3.6 CLEANING

- A. Perform initial and on-going maintenance according to the latest edition of the maintenance recommendations for Static Dissipative Tile.

### 3.7 PROTECTION

- A. Protect installed flooring as recommended by the flooring manufacturer against damage from rolling loads, other trades, or the placement of fixtures and furnishings. (See Finishing The Job in the latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061.)

END OF SECTION

SECTION 09 90 00 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY:

- A. The work includes the furnishing of all materials and equipment and the completion of all painting and painter's finish on all exposed exterior and interior surfaces as required to complete the finishing of the building as shown and noted on the drawings and specified herein. The General Conditions, Supplementary General Conditions, Special Conditions and Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS:

- A. Submittals shall be made in accordance with Division 01.
- B. Contractor shall prepare samples of colors and textures based upon the color selections and shall submit them in duplicate for approval.
- C. Contractor shall submit a list of all materials proposed for use for approval. If required by the Architect, the Contractor shall submit chemical analysis of paint material for review.
- D. Product data: Submit manufacturer product data.
- E. Samples: Submit paint brush-outs for all colors and sheens proposed for use on project.
- F. Closeout: Submit final schedule of colors with formulas for each paint color and sheen at project closeout.
- G. Extra Stock: One gallon of each color used, clearly marked with manufacturer label and mix design.

1.3 GENERAL REQUIREMENTS:

- A. The Contractor shall examine the drawings and the specifications of other trades and shall consult with the other trades to determine the full extent of work and items which are specified to include shop priming and shop finish painting.
- B. All conditions affecting the work of this section shall be verified at the job site.
- C. No materials other than those specified, or approved, shall be delivered to the job or used on the work. Materials shall be delivered in manufacturer's sealed containers with labels defining the contents thereon.
- D. Paint materials and equipment, when not in actual use, shall be stored in places specifically assigned for that purpose. Such storage space shall be well ventilated and adequately fire protected. All paint mixing and handling shall be performed in these assigned areas and all containers used for mixing and handling shall be metal and suitably designed for safety. All paint materials, including rags, tarpaulins, mixers, empty containers and filled or partially filled containers shall be removed from the building areas at the close of each working day.

**1.4 QUALITY ASSURANCE:**

- A. Regulatory Requirements: Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this Specification, comply with the more stringent provisions.
- B. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).
- C. Maximum Coverage: 425-550 sq. ft. per gallon, depending on surface conditions.
- D. Warranty:
  - 1. Require unconditional 2-year installation warranty commencing on substantial completion in addition to the manufacturer warranty.
  - 2. Require a site review with the designated District representative prior to expiration of warranty as a condition to end installation warranty period.
  - 3. Require manufacturer's standard warranties.

**1.5 WORK INCLUDED:**

- A. The intent and requirements of this section, is that all work, items and surfaces which are normally painted and finished in a building of this type and quality, shall be so included in this contract, whether or not said work, item or surface is specifically called out and included in the schedules and notes on the drawings, or is, or is not, specifically mentioned in these specifications.
- B. All exposed mechanical, plumbing and electrical work, which is not factory finished, shall be painted under this section.
- C. The Room Finish Schedules indicated on the drawings, indicates the location of interior room surfaces to be painted or finished. The finish schedule indications are general and do not necessarily define the detail requirements. The Contractor shall include all detailed refinements and further instructions as may be given by the Architect for the required complete finishing of all spaces and rooms.

**1.6 PRODUCT HANDLING:**

- A. Deliver all paint to site in manufacturer's labeled and sealed containers. Labels shall give manufacturer's name, brand, type, batch number, color of paint and instruction for reducing. Thin only in accordance with printed directions of manufacturer.

**1.7 ENVIRONMENTAL CONDITIONS:**

- A. Do not apply exterior paint in damp, rainy weather or until the surface has dried thoroughly from the effects of such weather. Do not apply varnish or paint when temperature is below 50 degrees F. Avoid painting surfaces when exposed to hot sunlight.

1.8 PROTECTION AND CLEAN UP:

- A. Before painting, remove hardware, accessories, plates, lighting fixtures and similar items or provide ample protection of such items.

On completion of each space, replace above items. Use only skilled mechanics for removing and connecting above items. Protect adjacent surfaces as required or directed.

- B. Wherever painting and finishing work is being performed, all floors, surfaces and items shall be carefully protected from damage by the painting work. Clean drop cloths shall be provided and used wherever necessary. All supplies, materials, paints, containers, etc., shall be orderly and carefully arranged and protected. All accidental spatter, spillage, etc., shall be immediately cleaned and the damaged surfaces restored to perfect condition. All paint spots and spatter on glass porcelain fixtures, etc., shall be completely removed and the surface cleaned.
- C. At the completion of work in each space or room, all materials, supplies, debris and rubbish shall be removed, and the areas left in a clean, orderly condition.
- D. GUARANTEE: This Contractor shall, in writing, guarantee the painting work against peeling, fading, cracking, blistering, or crazing for a period of two (2) years from the time the Notice of Completion is filed.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. Paint materials shall be as manufactured by Behr Paint (B), Vista Paint (V), Dunn Edwards Paints (D-E), Olympic Stain Co. (O), or as indicated in the Paint Schedule or approved equal.
- B. All products must be applied in accordance with the Approved manufacturer's directions.
- C. The Contractor shall secure the Color Schedule before undercoating. Unless otherwise specified, all undercoats shall be tinted slightly to approximate the color of the finish coat. Approval of color shall be obtained before proceeding with the work.
- D. Where a specific name is not given for a product or ingredient, such item shall be of the best quality of the approved manufacturer, which is normally used for the intended purpose.

2.2 MANUFACTURES:

1. Dunn Edwards <http://www.dunnedwards.com/>
2. Frazee / Sherwin Williams <https://www.sherwin-williams.com/>
3. Vista <https://www.vistapaint.com/>
4. or District Approved Equal

A. EXTEROIOIRS:

1. Exterior galvanized metals - Gloss: (All surfaces exposed to sight and/or weather).

Pre-treatment  
(F) 667 Phos-Pho-Prime  
OR (S) 7113 Vinyl Wash  
OR (D-E) GE 123 Galva-Etch

1 Coat (F) 661 Metal Primer  
OR (S) 25 Zinc Dust Primer  
OR (D-E) QD 43-7 Galv-Alum

1 Coat (F) 381 Super Bond II  
OR (S) 248 Sash and Trim Primer  
OR (D-E) 10 Series Syn-Lustro

1 Coat (F) 648 Aro-Plate  
OR (S) GE2 Sinco Gloss  
OR (D-E) 10 Series Syn-Lustro

2. Exterior Concrete and Plaster - Flat (100% Acrylic Emulsion) (including integrally colored plaster). Custom Color to be selected by architect.

1 Coat (F) 266 Epotilt  
OR (S) 18 Epoprime  
OR (D-E) W709 Eff-Stop

1 Coat (F) 202 Duratec  
OR (S) 1300 Stuc-O-Life  
OR (D-E) W 701 Evershield

B. INTERIORS:

1. Interior metals - Semi Gloss: (Including all exposed piping, conduit, electrical panels, miscellaneous brackets, bolts, fasteners, metal grilles and exposed ducts etc., other than plated or factory finished items).

Ferrous

1\* Coat (F) 661 Metal Prime  
OR (S) 15 Chrome Oxide Primer  
OR (D-E) 43-5 Corrobar

1 Coat (F) 381 Superbond II  
OR (S) 975 Sinco Prime Undercoater  
OR (D-E) E 22-1 Super U-365

1 Coat (F) 328 Velglo II  
OR (S) SG 25 Sinco Satin  
OR (D-E) E 5 Series Satin Sheen II

\*Omit 1st Coat on shop-primed surfaces

2. Metal - Epoxy Paint: (Not Applicable)

Ferrous:

1 Coat (F) 561 Acrylic Metal Primer  
OR (S) PA 72-11  
OR (D-E) 42-44 Versaprime

3. Gypsum Wallboard - Semi Gloss:
  - 1 Coat (F) 061 Aqua Seal  
OR (S) 1770 Pigmented PVA Sealer  
OR (D-E) W 101 Vinylastic
  - 1 Coat (F) 328 Velglo II  
OR (S) 975 Sinco Prime  
OR (D-E) E 22-1 Super U-365
  - 1 Coat (F) Satin Glide Semi Gloss Water Base Paint  
OR (S) SG 25 Sinco Satin  
OR (D-E) E 5 Series Satin Sheen II
4. Gypsum Wallboard - Eggshell:
  - 1 Coat (F) 061 Aqua Seal  
OR (S) 1770 Pigmented PVA Sealer  
OR (D-E) W 101 Vinylastic
  - 1 Coat (F) 022 Lo-Glo  
OR (S) 1790 Aqua Coater  
OR (D-E) W 440 Decosheen
  - 1 Coat (F) 022 Lo-Glo  
OR (S) 3000 Aqua Suede  
OR (D-E) W 440 Decosheen
5. Gypsum Wallboard - Gloss:
  - 1 Coat (F) 061 Aqua Seal  
OR (S) 1770 Pigmented PVA Sealer  
OR (D-E) W 101 Vinylastic
  - 1 Coat (F) 349 Fraglos II  
OR (S) 975 Sinco Prime Undercoater  
OR (D-E) E 22-1 Super U-365
  - 1 Coat (F) 349 Fraglos II  
OR (S) GE 8 Sinco Gloss Enamel  
OR (D-E) E 13 Practical Synthetic Gloss
6. Interior Hardwood - Stained:
  - 1 Coat (F) 786 Lacquer Stain  
OR (S) 2640 Lac-O-Rite  
OR (D-E) LQ 120 Decolac  
Filler (if required)  
OR (F) Jasco Paste Filler  
OR (S) 50 Paste Wood Filler  
OR (D-E) PWF 2703 Paste Wood Filler

1 Coat (F) 762 Lacquer Sanding Sealer  
OR (S) 2600 Sanding Sealer  
OR (D-E) LQ 101 Decolac

7. Interior Wood - Painted - Semi-Gloss:

1 Coat (F) 367 Fraflo II  
OR (S) 975 Sinco Prime  
OR (D-E) E 22-1 Super U-365

1 Coat (F) 328 Velglo II  
OR (S) SG 25 Sinco Satin  
OR (D-E) E 22-1 Super U-365

1 Coat (F) 328 Velglo II  
OR (S) SG 25 Sinco Satin  
OR (D-E) E 5 Series Satin Sheen II

8. Interior Wood - Painted - Eggshell:

1 Coat (F) 367 Fraflo II  
OR (S) 22 Aqua Prime Undercoater  
OR (D-E) W 707 Unikote

1 Coat (F) 022 Lo-Glo  
OR (S) 3000 Aqua Suede Enamel  
OR (D-E) W 440 Decosheen

1 Coat (F) 022 Lo-Glo  
OR (S) 3000 Aqua Suede Enamel  
OR (D-E) W 440 Decosheen

9. Interior Wood - Painted - Gloss:

1 Coat (F) 367 Fraflo II  
OR (S) 975 Sinco Prime Undercoter  
OR (D-E) E 22-1 Super U-365

1 Coat (F) 349 Fragloss II  
OR (S) GE8 Sinco Gloss Enamel  
OR (D-E) E 22-1 Super U-365

1 Coat (F) 349 Fragloss II  
OR (S) GE8 Sinco Gloss Enamel  
OR (D-E) E 13 Practical Synthetic Gloss

**PART 3 - EXECUTION**

**3.1 PREPARATION:**

- A. All surfaces shall be clean and dry prior to painting and finishing. Dirt and dust shall be removed by stiff bristle brush and wiping with cloths. Oil and grease shall be removed by solvent cleaning, using a solvent such as mineral spirits and wiping with clean cloths. Surfaces shall be given a final rinse of clean solvent. Surfaces which have been contaminated with chemicals shall be thoroughly rinsed with water. The first coat of paint shall be applied as soon as possible after cleaning and drying the surfaces.
- B. Shop primed ferrous metal surfaces shall be first washed free of grease, dirt, oil, and dust, using solvents as required. Galvanized surfaces shall be cleaned with solvents and given a vinyl wash coat. All shop primed surfaces shall be repaired and touched-up wherever shop priming is damaged, and at all welds.
- C. Concrete surfaces shall be thoroughly cleaned of all traces of form oil and other deposits from form surfaces and shall have all laitance and powder removed. Surfaces shall be clean and sound and thoroughly cured and dried before starting the painting work.
- D. Wood surfaces shall be sanded smooth and cleaned prior to application of the first coat. Holes, splits and scratches shall be puttied or spackled smooth after first coat application.
- E. Prior to vinyl covered tack surface installation all gypsum board walls to be prime painted and sized.

**3.2 APPLICATION:**

- A. All materials shall be applied and cut in neatly so as to dry uniformly to the color and sheen required and shall be free from excessive runs, sags, wrinkles, shiners, streaks and brush marks.
- B. All materials shall be applied in accordance with the approved manufacturer's directions and specifications. Any thinning required, shall be done in the manner and the type of reducer recommended.
- C. Each coat of painted work shall vary in shade from the proceeding coat in a manner that will make each coat readily distinguishable without affecting the finish color. The Architect will inspect each coat and operation before succeeding coats are applied to determine that the work meets the requirements of the specifications.
- D. In enclosed spaces, the application and drying of paint shall be performed only when the temperature is 65 degrees F. or above and maintained constantly to prevent condensation.
- E. Enamel coats shall be sanded smooth prior to re-coating. All defects and unevenness in previously applied coatings shall be repaired before applying the next coat.
- F. Exterior painting shall only be performed when the weather conditions, temperatures and humidity are correct.
- G. Workmanship shall be of the very best quality and only skilled mechanics shall be used on this project.

- H. The work of this section shall be subject to the approval of the Architect. Any work in need of correction because of improper preparation or workmanship, or as a result of failure to comply with these Specifications, shall be satisfactorily corrected by this Contractor at his own expense.
- I. Commencement of the painting work by this Contractor shall signify his acceptance of all surfaces as satisfactory to receive the finish specified herein.
- J. This Contractor shall be responsible for the complete painting finishing of all surfaces indicated in the Room Finish Schedule and as specified herein. Where questions occur as to the indicated surfaces, he shall inform the Architect and receive clarification therefrom.
- K. The proper number of coats of paints and other finishes specified, properly applied, will result in the desired **effect**. Should this effect not be attained, additional applications of the specified materials and methods shall be made by the Contractor, without additional costs to the Owner.
- L. Do not paint over existing transparent finishes. Existing transparent finishes shall be refinished to match existing. Specify finish compatible with existing.
- M. All existing surfaces to be repaired and prepared prior to painting.
- N. Three coat system over existing paint or new primed finishes to consist of one prime coat and two finish coats.
- O. All shop-primed items are to be fully re-primed in the field.
- P. Color-tint sealers and undercoats within general color range of finish color. Vary color of successive coats sufficiently to distinguish between coats.
- Q. Protect planting adjacent to buildings.
- R. Acid wash all galvanized materials. Etch and prime prior to finish painting and rinse thoroughly.
- S. Interior surface preparation of existing walls to include TSP cleaning, sanding and patching of all interior surfaces.
- T. Interior Surfaces
  - 1. Wood to be semi-gloss painted, or stained, polyurethane clear finish, for decorative wood doors and casework.
  - 2. Doors and frames to be one color, gloss enamel paint.

END OF SECTION

SECTION 10 14 00 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers the furnishing and installing of interior and exterior signs and directories as indicated and specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 REFERENCES

- A. The editions of standards and specifications published by the following organizations, and referenced herein, apply to the work only to the extent specified by the reference.

American Society for Testing and Materials (ASTM)  
The Aluminum Association (AA)  
American National Standards Institute (ANSI)  
Architectural Aluminum Manufacturers Association (AAMA)  
U.S. General Services Administration (Fed. Spec.)

1.3 RELATED SECTIONS

- A. 09 24 23 Cement Plaster and Metal Lath
- B. 09 29 00 Gypsum Board

1.4 SUBMITTALS:

- A. Submittal procedures and quantities are specified in Section 01300.
- B. Shop Drawings: Submit complete shop drawings, catalog cuts, and erection and installation details, as appropriate, for all identification devices. Indicate dimensions, construction details, and installation with relation to the building construction.
- C. Samples: Submit samples of all materials, finishes and coatings before fabrication. Samples shall also include all hardware and attachments required for mounting and/or assembly. All finishes and coatings shall show color and shall be submitted on the materials to which they are to be applied.

1.5 REGULATORY REQUIREMENTS

- A. Signage and graphics: (shall comply with CBC Section 11B-703)
  - 1. Raised characters shall comply with CBC Section 11B-703.2:
  - 2. Depth: It shall be 1/32 inch (0.8 mm) minimum above their background and shall be sans serif uppercase and be duplicated in Braille.
  - 3. Height: It shall be 5/8 inch (15.9 mm) minimum and 2 inches (51 mm) maximum based on the height of the uppercase letter "I". CBC Section 11B-703.2.5

4. Finish and Contrast: Characters and their background shall have a non-glare finish. Character shall contrast with their background with either light characters on a dark background or dark characters on a light background. CBC Section 11B-703.5.1
  5. Proportions: It shall be selected from fonts where the width of the uppercase letter "O" is 60% minimum and 110% maximum of the height of the uppercase letter "I". Stroke thickness of the uppercase letter "I" shall be 15% maximum of the height of the character. CBC Sections 11B-703.4 and 11B-703.6
  6. Character Spacing: Spacing between individual tactile characters shall comply with CBC Section 11B-703.2.7.
  7. Line Spacing: Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height. CBC Section 11B-703.2.8.
  8. Braille: It shall be contracted (Grade 2) and shall comply with CBC Sections 11B-703.3 and 11B-703.4. Braille dots shall have a domed and rounded shape and shall comply with CBC Table and Figure 11B-703.3.1.
  9. Mounting height: A tactile sign shall be located 48" minimum to the baseline of the lowest Braille cells and 60" maximum to the baseline of the highest line of raised characters above the finish floor or ground surface.
  10. Mounting location: A tactile sign shall be located on the approach side, as one enters or exits rooms or space, and be reached within 0" of the required clear floor space per CBC Section and Figure 118 -703.4.2 as follows:
    - a. A clear floor space of 18' x 18" minimum, centered on the tactile characters, shall be provided beyond the arc of any door swings between the closed position and 45-degree open position.
    - b. On the wall at the latch side of a single door.
    - c. On the inactive leaf of a double door with one active leaf.
    - d. On the wall at the right side of a double door with two active leafs.
    - e. On the nearest adjacent wall where there is no wall space at the latch side of a single door or no space at the right side of a double door with two active leafs.
- B. Visual characters shall comply with CBC Section 11B-703.5 and shall be 40" minimum above finish floor or ground.
- C. Pictograms shall comply with CBC Section 11B-703.6.
- D. Symbol of accessibility shall comply with CBC Section 11B-703.7.

## 1.6 SUBMITTALS

- A. Product data: Submit manufacturer product data.
- B. Shop Drawings: Require diagrams of each type and size of sign.
- C. Submit sign samples.

## 1.7 WARRANTY

- A. Require unconditional 2-year installation warranty commencing on substantial completion in addition to the manufacturer warranty.
- B. Require a site review with the designated District representative prior to expiration of warranty as a condition to end installation warranty period.
- C. Require manufacturer's standard warranties.

## PART 2 - PRODUCTS

### 2.1 ACRYLIC PLASTIC PLAQUE SIGNS

- A. Acceptable Products: Acceptable product includes the following, or equal:
  - 1. ASI <http://asignage.com>
  - 2. Gemini <http://www.geminisigns.com>
  - 3. Vomar Products <http://vomarproducts.com>
  - 4. Mohawk Sign Systems <http://mohawksign.com>
  - 5. Western Highway Products  
<http://www.westernsafety.com/westernhighway/westhighwaypg1.html>
  - 6. Or District Approved Equal
- B. Provide matte finish plaques in sizes indicated. Fabricate of 0.080 inch thick clear acrylic laminated to 1/8 inch thick oversized opaque acrylic base creating a 1/8 inch uniform border. Provide 1 inch radius corners.
- C. Graphics Application: Silk screen message to rear surface of clear plastic sheet before application of background color.
- D. Messages: See drawings for message content, type face and size. Colors shall be as selected from the manufacturer's standard colors.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates to receive adhesively applied identification devices before start of work to ensure that they are free of grease, oil, paint, wax, dust, dirt, or other foreign matter that might inhibit bonding to the substrate.

- B. Do not start work until deficiencies have been corrected. Start of work of this section constitutes acceptance of the surfaces.

### 3.2 INSTALLATION

- A. Install signs at locations indicated. Ensure that signs are installed plumb and true, at mounting heights indicated, and by method specified. Do not install signs on doors or other surfaces until finishes on such surfaces have been applied.
- B. Anchorage: Provide anchorage where necessary for fastening signs securely in place. Anchorage not otherwise specified or indicated shall include expansion shields and powder-driven fasteners, when approved, for concrete and masonry; toggle or molly bolts to stud flanges or steel backing plates in light gage metal framed partitions; full threaded wood screws to wood doors and machine screws to metal doors. All exposed anchor devices to be vandal proof type.

### 3.3 ADJUST AND CLEAN

- A. Repair damage to signs incurred during installation. Replace signs which cannot be repaired to new condition. Clean sign surfaces.

END OF SECTION

**SECTION 10 44 13 – FIRE PROTECTION & FIRE EXTINGUISHERS**

**PART 1 - GENERAL**

**1.1 SUMMARY:**

- A. The work includes the furnishing and installing of fire extinguishers and cabinets as indicated on drawings and specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

**1.2 REQUIREMENTS OF REGULATORY AGENCIES:**

- A. Fire extinguishers shall be labeled by Underwriter's Laboratories, Inc. for the ratings specified. Fire extinguishers shall meet the requirements of California Administrative Code Title 19 and shall comply with CFC Standard Sec. 10-1, 2016 edition.

**1.3 SUBMITTALS:**

- A. Submit manufacturer's catalog cuts or other descriptive data for extinguishers and cabinets.
- B. Submittals shall be in accordance with Section 01 33 00.

**1.4 PRODUCT DELIVERY, STORAGE AND HANDLING:**

- A. Deliver fire extinguishing equipment to the site in unopened containers labeled with the manufacturer's name and model numbers as they appear on the product list.
- B. Store equipment in their containers in a dry location.

**PART 2 - PRODUCTS**

**2.1 FIRE EXTINGUISHERS:**

- A. Fire extinguishers shall be multi-purpose dry chemical type rated 4A-40B:C. Except at Multi-Purpose Building Kitchen. Extinguisher to be Type K.
- B. Substitutions: Per Division 01

**PART 3 - EXECUTION**

- A. Before wall framing is covered with wallboard, check to assure that pipes, vents, conduits, or other construction features do not protrude into the rough opening space for recessed cabinets.
- B. Wrap fire-rated construction around all cabinets installed in fire rated walls.
- C. Install fire extinguishers and cabinets in accordance with the manufacturer's instructions. In no case mount extinguishers higher than 48 inches to handle.

END OF SECTION

**SECTION 12 24 13 - WINDOW ROLLER SHADES**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Single solar roller shades for manual operation.
- B. Double Roller shades for manual operation and accessories.
- C. Shade fabric.

**1.2 RELATED SECTIONS**

- A. Section 09 29 00 - Gypsum Board

**1.3 REFERENCES**

- A. ASTM International (ASTM):
  - 1. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
- B. Business and Institutional Furniture Manufacturers Association (BIFMA):
  - 1. BIFMA HCF 8.1 - Health Care Furniture Design - Guidelines for Cleanability.
- C. National Fire Protection Association (NFPA):
  - 1. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
  - 2. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.
- D. Underwriters Laboratories (UL):
  - 1. UL (GGG) - GREENGUARD Gold Certified Products; Current Edition.
- E. Window Covering Manufacturers Association (WCMA):
  - 1. WCMA A100.1 - Safety of Window Covering Products; 2018.

**1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Coordinate the work with other trades to provide rough-in of electrical wiring as required for installation of hardwired motorized shades.
- B. Preinstallation Meeting: One week prior to commencing work related to this section. Require attendance of all affected installers.

- C. Sequencing:
  - 1. Do not fabricate shades until field dimensions for each opening have been taken with finished conditions in place. "Hold to" dimensions are not acceptable.
  - 2. Do not install shades until final surface finishes and painting are complete.

## 1.5 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's catalog pages and data sheets for products specified including materials, finishes, dimensions, profiles, mountings, and accessories.
  - 1. Submit manufacturer product data.
  - 2. Provide shop drawings showing floor plan and elevations of each window, control diagrams, and anchorage. Include location of the pull chain or controllers and motors.
  - 3. Preparation instructions and recommendations.
  - 4. Styles, material descriptions, dimensions of individual components, profiles, features, finishes , accessories, and operating instructions.
  - 5. Storage and handling requirements and recommendations.
  - 6. Mounting details and installation methods.
  - 7. Manufacturer's Instructions: Include storage, handling, protection, examination, preparation, and installation.
  - 8. Project Record Documents: Record actual locations of control system components and show interconnecting wiring.
  - 9. Operation and Maintenance Data: Component list with part numbers, and operation and maintenance instructions.
- C. Shop Drawings: Plans, elevations, sections, product details, installation details, operational clearances, wiring diagrams and relationship to adjacent work.
  - 1. Prepare shop drawings on AutoCad or MicroStation format using base sheets provided electronically by the Architect.
- D. Window Treatment Schedule: For all roller shades. Use same room designations as indicated on the Drawings and include opening sizes and key to typical mounting details.
- E. Verification Samples: For each finish product specified, one complete set of shade components, unassembled, demonstrating compliance with specified requirements.
  - 1. Shadecloth Sample: Mark face of material to indicate interior faces.

- a. Test reports indicating compliance with specified fabric properties.
  - b. Verification Samples: 6 inches square, representing actual materials, color and pattern.
- F. Maintenance Data: Bill of materials for all components with part numbers. Methods for maintaining roller shades, precautions regarding cleaning materials and methods, instructions for operating hardware and controls.
- G. Warranty: Manufacturer's warranty documents as specified in this Section.

#### 1.6 QUALITY ASSURANCE

- A. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.
- B. Manufacturer Qualifications: Obtain roller shades system through one source from a single manufacturer with a minimum of ten years experience and minimum of five projects of similar scope and size in manufacturing products comparable to those specified in this section.
- C. Installer for Roller Shade System - Qualifications: Installer trained and certified by the manufacturer with a minimum of ten years experience in installing products comparable to those specified in this section.
- D. Product Listing Organization Qualifications: Organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.
- E. Fire-Test-Response Characteristics: Passes NFPA 701 small and large-scale vertical burn. Materials tested shall be identical to products proposed for use.
- F. Shadecloth Anti-Microbial Characteristics: 'No Growth' per ASTM G 21 results for fungi ATCC9642, ATCC9644, ATCC9645.
- G. Resistance to Degradation When Exposed to Typical Cleaners: Passes BIFMA HCF 8.1 testing.
- H. Warranty:
  - 1. Require unconditional 2-year installation warranty commencing on substantial completion in addition to the manufacturer warranty.
  - 2. Require a site review with the designated District representative prior to expiration of warranty as a condition to end installation warranty period.
  - 3. Require manufacturer's standard warranties.

#### 1.7 MOCK-UP

- A. Provide a mock-up of one roller shade assembly for evaluation of mounting, appearance and accessories.
  - 1. Locate mock-up in window designated by Architect.

2. Mockup Size: Full size.
3. Mockup Size(WxH): 2 x 2 feet minimum.
4. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
5. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
6. Do not proceed with remaining work until, mock-up is accepted by Architect.
7. Retain mock-up during construction as a standard for comparison with completed work.
8. Do not alter or remove mock-up until work is completed or removal is authorized.
9. Full-sized mock-up may become part of the final installation.
10. Full-sized mock-up will become the property of the Owner to be used for spare parts.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver in factory-labeled packages, marked with manufacturer and product name, fire-test-response characteristics, and location of installation using same room designations indicated on Drawings and in Window Treatment Schedule.
- B. Store and handle products per manufacturer's recommendations.

#### 1.9 PROJECT CONDITIONS

- A. Environmental Limitations: Install roller shades after finish work including painting is complete and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

#### 1.10 WARRANTY

- A. Roller Shade Hardware and Chain Warranty: Manufacturer's standard non-depreciating warranty for interior shading.
  1. Shade Hardware: 10 years unless otherwise indicated.
    - a. Mecho/5X with ThermoVeil, EuroVeil, EuroTwill, Soho, Equinox, Midnite, Chelsea, or Classic Blackout shade fabric: 25 years.
  2. Standard Shadecloth: Manufacturer's standard twenty-five year warranty.
  3. Roller Shade Installation: One year from date of Substantial Completion, not including scaffolding, lifts or other means to reach inaccessible areas, which are deemed owner's responsibility.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Mecho, which is located at: 42-03 35th St.; Long Island City, NY 11101; Carlos Herrera Tel: 626-369-7777; Fax: 626-369-1015; Email: carlos.herrera@mechoshade.com; Web: <http://www.mechoshade.com>
  - 1. Skyco <http://www.skycoshade.com/>
  - 2. Draper <https://www.draperinc.com/windowshades/>
- B. Requests for substitutions will be considered in accordance with provisions of Division 010.

### 2.2 ROLLER SHADES, MANUAL OPERATION AND ACCESSORIES

- A. Shade System; General:
  - 1. Components capable of being removed or adjusted without removing mounted shade brackets, or cassette support channel.
  - 2. Smooth operation raising or lowering shades.
- B. Basis of Design: Mecho/5x System as manufactured by Mecho.
  - 1. Description: Manually operated fabric window shades.
    - a. Shade Type: Double Roller.
    - b. Shade Tyoe: Single roller.
    - c. Universal drive capability to offset drive chain for reverse or regular roll shades.
    - d. Drop Position: Regular roll.
    - e. Mounting: Wall Mounted.
    - f. Fabric: As indicated under Shade Fabric article.
  - 2. Brackets and Mounting Hardware: As recommended by manufacturer for mounting indicated and to accommodate shade fabric roll-up size and weight.
    - a. Material: Steel, 1/8 inch thick.
    - b. Double Roller Brackets: Configured for light-filtering and room-darkening shades in one opening.
      - 1) Light-Filtering Fabric: Room-side of opening.
      - 2) Room-Darkening Fabric: Glass-side of opening.
      - 3) Operating chain pulls for both fabrics configured for the same side of the window.
    - c. Single Shade Operation Width: Up to 180 inches (4572) dependent on fabric for single shades.
    - d. Multiple Shade Band Operation: Provide hardware as necessary to operate more five shade bands, up to 360 inches wide; depending on fabric weight, using a single clutch operator.
    - e. Radiused Center Support Brackets: Provide brackets and connectors for

- 1) radiused window applications.  
1) Maximum Offset: Eight degrees on each side for a 16 degree total offset.
- 3. Roller Tubes:
  - a. Material: Extruded aluminum.
  - b. Size: As recommended by manufacturer; selected for suitability for installation conditions, span, and weight of shades.
  - c. Fabric Attachment: Utilize extruded channel in tube to accept vinyl spline welded to fabric edge. Shade band to be removable and replaceable without removing roller tube from brackets or inserting spline from the side of the roller tube.
  - d. Roller tubes to be capable of being removed and reinstalled without affecting roller shade limit adjustments.
- 4. Hembars: Designed to maintain bottom of shade straight and flat.
  - a. Style: Full wrap fabric covered bottom bar, flat profile with heat sealed closed ends.
  - b. Style: Exposed aluminum bottom bar with matching finials.
    - 1) Profile: Rectangular.
    - 2) Color: Manufacturer's standard color coordinated with shade fabric selected.
  - c. Room-Darkening Shades: standard wrapped hem bar.
- 5. Clutch Operator: Manufacturer's standard material and design integrated with bracket/brake assembly.
  - a. Heavy-duty, 1/8" steel mounting bracket and integrated steel brake, clutch and sprocket assembly rigidly affix the shade support and user control to the building structure fully independent of the roller tube components.
  - b. Permanently lubricated maintenance-free brake assembly employs an oil-impregnated steel hub with wrapped spring clutch.
  - c. Brake must withstand minimum pull force of 50 pounds (22.7 kg) in the stopped position.
  - d. Direct drive clutch requires no interstitial gear stages or plastic parts between the building structure and clutch ensuring reliable operation across the full range of shade sizes.
  - e. Maximum shade hanging weight of 30 pounds (13.6 kg).
- 6. Drive Chain: Continuous loop stainless steel beaded ball chain, 100 pound (45 kg) minimum breaking strength. Provide upper and lower limit stops.
  - a. Chain Retainer: Chain tensioning device complying with WCMA A100.1.
  - b. Limit stops: Bead stops affixed to the chain maintain consistent shadeband alignment at the top and bottom of shade travel across multiple shades, and help prevent shade damage resulting from unmanaged user control.
- 7. Mecho/5x, Managed Lift Force, Hardware: Lifts single band or multiband shade assemblies:

- a. Lifting Force: 3 to 8.5 pounds (1.4 to 3.9 kg) max pull force to lift shade assemblies with a shade band hanging weight, not including mounting hardware, of 30 pounds (13.6 kg).
  - b. Direct drive clutch with Managed Lift Force provides the best user experience by managing the user pull force while using the fewest number of chain pulls to position a shade.
  - c. Backward compatible to Mecho/5 components including fascia, regular and reverse roll, pockets, and wall-mounting accessories.
  - d. Includes offset drive capability, left/right, front, or back to allow for utilization of blackout channels.
  - e. Allows for ease of operation when obstructions do not allow for direct drive chain access.
  - f. Offset chain drive shall not cause an increase of friction or pull force when operated up to a 26 degree angle from vertical.
8. Accessories:
- a. Fascia: Removable extruded aluminum fascia, size as required to conceal shade mounting, attachable to brackets without exposed fasteners.
    - 1) Finish: Baked enamel.
      - a) Color: to be selected from standard colors.
    - 2) Can be installed across two or more shade bands in one piece.
  - b. Adjustable Multi-band Coupler: Field-adjustable coupler positioned between adjacent shadebands driven by the same clutch facilitates hembar alignment between the bands while maintaining the light gap between the shade bands to no more than 1.25 inches (32mm).

### 2.3 ROLLER SHADE FABRICATION

- A. Field measure finished openings prior to ordering or fabrication.
- B. Openings Requiring Continuous Multiple Shade Units with Separate Rollers: Locate roller joints at window mullion centers; butt rollers end-to-end.
- C. Product:
  1. Roller shades to comply with WCMA A 100.1
  2. Flame Resistance Rating: Pass NFPA 701

### 2.4 SHADE FABRIC

- A. Basis of Design:
  1. Solar Shadecloths:
    - a. Fabric: Soho Elavate: 1681 series. 3 percent open. 2 x 2 basket-weave pattern of fine yarn PVC and polyester blend, Powered by PROTX2®
    - b. Color: Selected from manufacturer's standard colors.
  2. Blackout Shadecloths:

- a. Fabric: Classic Blackout: 0700 series. Opaque. Vinyl coated fabric blackout material same color reverse side (for exterior).
  - b. Color: Selected from manufacturer's standard colors.
3. Fabric Properties: Non-flammable, color-fast, impervious to heat and moisture, and able to retain its shape under normal operation.
- a. Shade Type: Room darkening shades.
4. Material Certificates and Product Disclosures:
- a. Low-Emitting Material Certification: Greenguard Gold certified and listed in UL (GGG).
  - b. Health Product Declaration (HPD): Published declaration with full disclosure of known hazards.
5. Performance Requirements:
- a. Flammability per NFPA 701: Pass. Large or small scale test.
  - b. Fungal Resistance: No growth when tested per ASTM G21.
6. Color: As selected by Architect from manufacturer's full range of colors.
7. Fabrication:
- a. Fabric Orientation: Railroaded, fabric is turned 90 degrees off the roll.
  - b. Battens: Manufacturer's standard material, full width of shade, and enclosed in welded shade fabric pocket; locate as indicated on drawings.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Start of installation shall be considered acceptance of substrates.

#### **3.2 PREPARATION**

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.
- C. Coordinate with window installation and placement of concealed blocking to support shades.

#### **3.3 INSTALLATION**

- A. Install shades level, plumb, square, and true per manufacturer's instructions and approved

**SECTION 12 24 13  
WINDOW ROLLER SHADES**

shop drawings. Locate so shade band is at least 2 inches (51 mm) from interior face of glass. Allow proper clearances for window operation hardware. Use mounting devices as indicated.

- B. Replace shades exceeding specified tolerances at no extra cost to Owner.
- C. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range. Adjust level, projection, and shade centering from mounting bracket. Verify there is no telescoping of shade fabric.
- D. Clean roller shade surfaces after installation, per manufacturer's written instructions.
- E. Demonstrate operation and maintenance of window shade system to Owner's personnel.
- F. Manufacturer's authorized personnel are to train Owner's personnel on operation and maintenance of system.
  - 1. Use operation and maintenance manual as a reference, supplemented with additional training materials as required.

**3.4 PROTECTION AND CLEANING**

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.
  - 1. Clean soiled shades and exposed components as recommended by manufacturer.
  - 2. Replace shades that cannot be cleaned to "like new" condition.

**END OF SECTION**



# MAKERSPACE CONVERSION - SAN JACINTO CAMPUS MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT BUILDING 100, ROOMS 110 & 111

1499 N. STATE STREET  
SAN JACINTO, CA 92583

CONSULTANT:

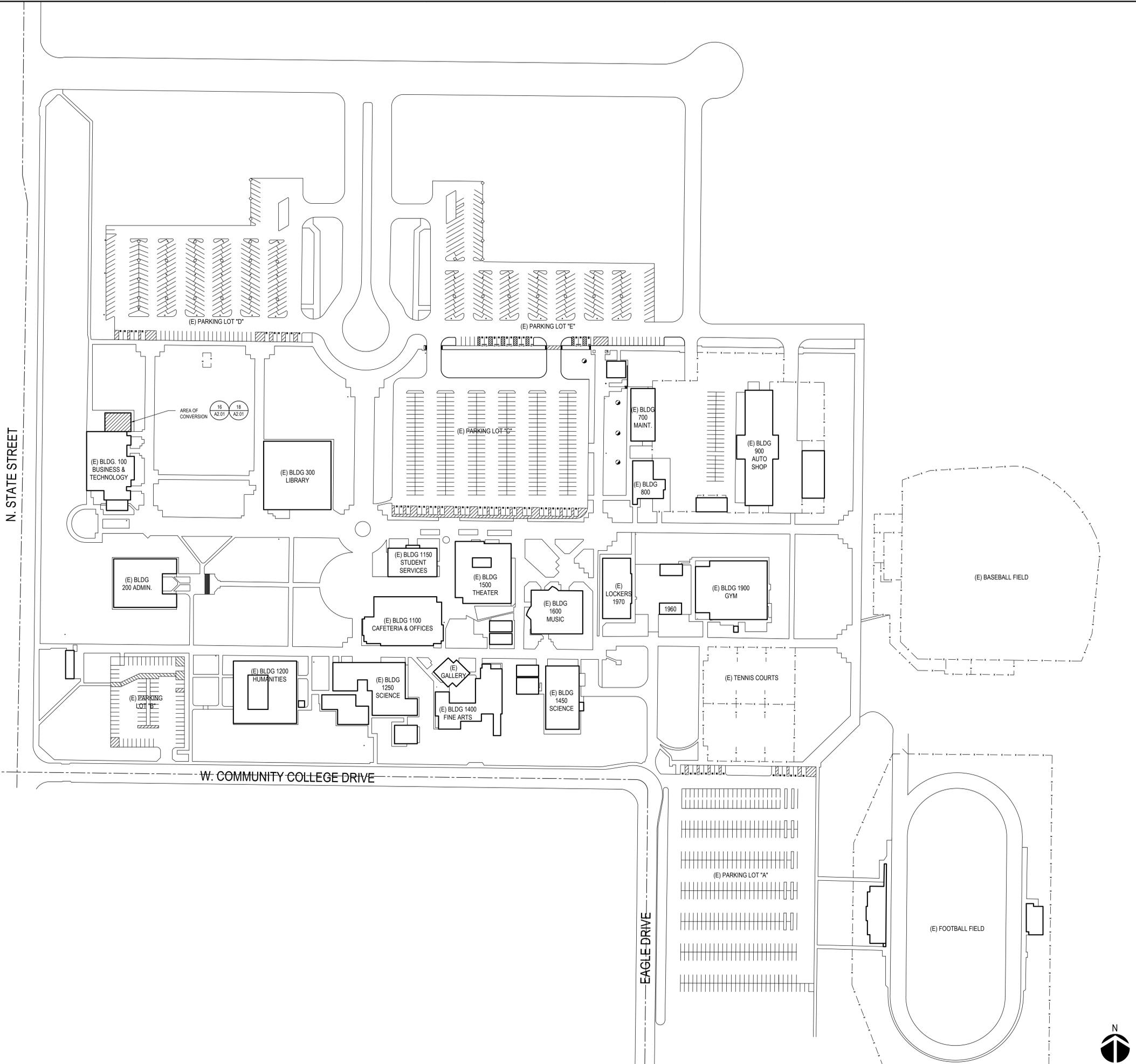
TITLE SHEET  
MAKERSPACE CONVERSION - SAN JACINTO CAMPUS  
MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
BUILDING 100, ROOMS 110 & 111  
1499 N. STATE STREET, SAN JACINTO, CA 92583



PROJECT NUMBER	21-1410-00
PROJECT STATUS	BID DOCUMENTS
PROJECT ISSUED	9/16/2021
REVISION	DATE
DESCRIPTION	

0.0

GENERAL NOTES	SCOPE OF WORK	PROJECT DIRECTORY	SHEET INDEX:																																										
<p><b>CONSTRUCTION DOCUMENT NOTES:</b></p> <ol style="list-style-type: none"> <li>THE GENERAL CONTRACTOR SHALL CAREFULLY REVIEW AND COMPARE THE CONTRACT DOCUMENTS PRIOR TO CONSTRUCTION AND SHALL AT ONCE REPORT TO THE ARCHITECT ANY ERROR, INCONSISTENCY, OR OMISSION THE CONTRACTOR MAY DISCOVER. IF THE CONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WITHOUT PRIOR NOTICE TO THE ARCHITECT, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY, AND SHALL BEAR ALL COSTS ATTRIBUTABLE THERETO FOR CORRECTION OF THE WORK.</li> <li>CONTRACTOR SHALL REVIEW CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS FOR ACCURACY AND CONSTRUCTIBILITY.</li> <li>CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE SITE BEFORE STARTING ANY WORK AND REPORT FOR CLARIFICATION ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.</li> <li>THE CONSULTING ENGINEERS' DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. SHOULD THERE BE A DISCREPANCY BETWEEN THE ARCHITECTURAL DRAWINGS AND THE CONSULTING ENGINEERS' DRAWINGS, SUCH DISCREPANCY IS TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT CONTRACTORS EXPENSE.</li> <li>NOTWITHSTANDING ANY OMISSIONS, IT SHALL BE THE SOLE DUTY AND RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL CONSTRUCTION DETAILS AND FABRICATE AND INSTALL SAID DESIGN IN ACCORDANCE WITH ACCEPTED BEST PRACTICES AND PROCEDURES.</li> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND COORDINATION WITH OTHER TRADES AND THEIR WORK FOR COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS.</li> <li>IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE ALL WORK WITH THE SUBCONTRACTORS. IF A PORTION OF WORK FOR A SPECIFIC TRADE APPEARS IN A SECTION OF THESE DOCUMENTS OTHER THAN THAT WHICH IS SPECIFIC TO THAT TRADE, IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE SAID TRADE OF SUCH WORK.</li> <li>CONTRACTOR TO COORDINATE WITH H.I.C. EQUIPMENT CONTRACTOR(S) BEFORE STARTING WORK ADJACENT TO H.I.C. EQUIPMENT SHOWN ON DRAWINGS. VERIFY THAT ALL ITEMS (SUCH AS BELOW FLOOR PIPING AND ELECTRICAL CONDUITS, INSERTS, PIT AND PLATFORM, SIZES AND LOCATIONS, ETC.) HAVE BEEN PROVIDED AND INSTALLED AS REQUIRED FOR OPERATION OF THIS EQUIPMENT. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.</li> <li>VERIFY LOCATION AND SIZE OF OPENINGS, BLOCKING, INSERTS, AND EMBEDDED ITEMS ON APPLICABLE SHOP DRAWINGS BEFORE STARTING WORK.</li> <li>CONTRACTOR SHALL COORDINATE WITH ALL EQUIPMENT MANUFACTURERS FOR EQUIPMENT ROUGH-IN REQUIREMENTS.</li> <li>CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF ALL OPENINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT WITH RESPECTIVE SUBCONTRACTORS.</li> <li>THE GENERAL CONTRACTOR SHALL COORDINATE CUTOUTS FOR CASEWORK, MILLWORK, OR OTHER EQUIPMENT AS REQUIRED.</li> <li>ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED, AND INDICATED IN THE CONTRACTORS BID.</li> <li>THE USE OF THE WORD "PROVIDE" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN THAT SUCH SHALL BE FURNISHED, INSTALLED COMPLETE, CONNECTED AND TESTED FOR PROPER OPERATION WHERE SO REQUIRED.</li> <li>PROVIDE ALL PERTINENT SHOP DRAWINGS FOR APPROVAL IN ADVANCE OF FABRICATION AND INSTALLATION ALLOWING SUFFICIENT TIME FOR REVIEW AND CORRECTIVE ACTIONS SHOULD IT BE REQUIRED. SUBMIT CUT SHEETS OF ALL FIXTURES, EQUIPMENT AND SAMPLES OF ALL FINISHES SPECIFIED FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.</li> <li>PRIOR TO SUBMITTAL OF BID, NOTIFY ARCHITECT IN WRITING, IF ANY SPECIFIED MATERIALS OR EQUIPMENT ARE EITHER UNAVAILABLE OR WILL CAUSE A DELAY IN THE CONSTRUCTION COMPLETION SCHEDULE.</li> <li>ARCHITECT IS NOT RESPONSIBLE FOR THE ACCURACY OF INFORMATION CONTAINED IN OWNER SUPPLIED DOCUMENTS.</li> <li>DO NOT SCALE DRAWINGS. IN CASE OF DISCREPANCIES, OBTAIN CLARIFICATION FROM THE ARCHITECT.</li> <li>LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS. CONTRACTOR TO NOTIFY ARCHITECT OF DISCREPANCIES.</li> <li>DETAILS ARE NOT INTENDED TO SHOW METHOD AND MANNER OF ACCOMPLISHING WORK.</li> <li>WHEN +, - SIGN OR V.I.F. ABBREVIATION IS ADJACENT TO A GIVEN DIMENSION, IT INDICATES THAT THE ACTUAL DIMENSION MIGHT VARY DUE TO EXISTING CONDITIONS. VERIFY DIMENSIONS BEFORE PROCEEDING WITH THE WORK; DISCREPANCIES BETWEEN THE NOTED DIMENSIONS AND ACTUAL DIMENSIONS ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.</li> <li><b>HAZARDOUS MATERIAL NOTES:</b></li> <li>THE ARCHITECT ASSUMES NO RESPONSIBILITY RELATING TO ANY HAZARDOUS OR TOXIC MATERIALS, INCLUDING ASBESTOS, AND ASSUMES NO RESPONSIBILITY FOR VERIFYING ITS EXISTENCE OR REMOVAL. THE OWNERTENANT SHALL TAKE ACTION FOR DIRECTLY CONTRACTING WITH A CONSULTANT OR SPECIALIST FOR SUCH LICENSED BY THE STATE OF CALIFORNIA, SHOULD THOSE SERVICES BE REQUIRED ON THE PROJECT.</li> <li>NO PRODUCTS CONTAINING ASBESTOS OR LEAD IN ANY FORM SHALL BE USED ON ANY PART OF THE WORK.</li> <li><b>CONSTRUCTION NOTES:</b></li> <li>MAKE NECESSARY PROVISIONS TO PROTECT EXISTING CONSTRUCTION AND BUILDING IMPROVEMENTS, CONCRETE SIDEWALKS CURBS, ETC. AND UPON COMPLETION OF WORK REPAIR ANY DAMAGE THAT MAY OCCUR DURING CONSTRUCTION. MAKE NECESSARY PROVISIONS TO INCLUDE TEMPORARY DUST TIGHT PARTITIONS TO PREVENT SPREAD OF DUST AND DIRT TO UNHABITED AREAS OF THE EXISTING BUILDINGS AND PROTECT EXISTING FACILITIES ON AND ADJACENT TO THE SITE. VERIFY EQUIPMENT LOCATIONS AND REQUIREMENTS WITH CONSULTANTS' DRAWINGS AND COORDINATE WITH CONTRACT</li> </ol>	<ol style="list-style-type: none"> <li>DOCUMENTS, REMOVE AND LEGALLY DISPOSE OF DEBRIS, RUBBISH, ETC., LEAVING AREA CLEAR AND BROOM CLEAN READY FOR WORK. ROUTE FOR RUBBISH DISPOSAL SHALL BE APPROVED BY OWNER.</li> <li>NEITHER THE OWNER NOR THE ARCHITECT SHALL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES DURING SHORING AND BRACING, AND SHALL SOLELY BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH REGULATIONS, STANDARDS AND LAWS.</li> <li>THE GENERAL CONTRACTOR AND SUBCONTRACTORS PERFORMING WORK ON THE PREMISES SHALL BE RESPONSIBLE FOR MAINTAINING AND SUPERVISING THEIR SAFETY PROGRAM, INCLUDING, BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF DEBRIS OR TOOLS WHICH MIGHT ENDANGER VISITORS, PATIENTS OR EMPLOYEES OF THE FACILITY. ALL ROADS AND WALKWAYS SHALL REMAIN UNOBSTRUCTED. WHEN NECESSARY, ALTERNATE ROUTES OF TRAFFIC CONTROL MUST BE MAINTAINED, SHOULD UNSAFE CONDITIONS OCCUR.</li> <li>CONTRACTOR SHALL PROVIDE BARRICADES AROUND ALL NEW AND EXISTING OPENINGS WHERE REQUIRED OR NECESSARY FOR SAFETY.</li> <li>CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC., AS REQUIRED TO PROTECT THE PUBLIC DURING THE PERIOD OF CONSTRUCTION. CONSTRUCTION BARRICADE WALLS TO BE EQUAL TO RATINGS OF THE WALL REPLACED.</li> <li>CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS CLEAN UP OF THE SITE OF ALL DEBRIS WHETHER CREATED BY HIS WORK OR THE FAILURE OF HIS SUB-CONTRACTORS TO CLEAN UP AFTER THEIR WORK.</li> <li>THE CONTRACTOR SHALL MAINTAIN EQUIPMENT, MATERIALS AND WORK IN A NEAT, CLEAN, ORDERLY AND SAFE CONDITION AT ALL TIMES</li> <li>CONTRACTOR SHALL KEEP SITE AND BUILDING CLEAN, HAZARD FREE AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH, ETC. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SOILS OF ANY NATURE</li> <li>CONTRACTOR SHALL LEAVE WORK / PROJECT AREA IN A SECURE CONDITION DURING PERIOD OF THIS WORK WHEN WORKERS ARE NOT ON THE PROJECT SITE.</li> <li>CONTRACTOR TO SCHEDULE CONSTRUCTION ACTIVITIES TO HAVE THE LEAST IMPACT ON EXISTING BUILDING FUNCTIONS. THIS INCLUDES RESTRICTING TYPICAL DEMOLITION AND CONSTRUCTION ACTIVITIES TO THE HOURS DESIGNATED BY THE OWNER. CERTAIN ACTIVITIES SUCH AS THE USE OF JACKHAMMERS ON EXISTING BUILDINGS WILL NEED TO BE SCHEDULED AT SPECIAL TIMES. CONTACT THE OWNER FOR SCHEDULING OF ALL ACTIVITIES.</li> <li>THE GENERAL CONTRACTOR SHALL MAKE SPECIAL PROVISIONS FOR NOISE AND DUST CONTROL SO AS NOT DISRUPT EXISTING ADJACENT OCCUPIED AREA.</li> <li>THE CONTRACTOR SHALL COOPERATE WITH OWNER AS REQUIRED TO MINIMIZE INTERFERENCE WITH AND DISRUPTION OF OWNER ACTIVITIES.</li> <li>THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING SITE ACCESS, STAGING AREAS, USE OF SITE, USE OF UTILITY SERVICES AND FACILITIES.</li> <li>CONTRACTOR SHALL MAINTAIN FIRE LANES, PEDESTRIAN AND VEHICULAR ACCESS, FIRE PROTECTIVE DEVICES AND ALARMS DURING CONSTRUCTION.</li> <li>DO NOT STORE MATERIALS ON ANY FLOOR OR ROOF IN EXCESS OF ALLOWABLE LOAD.</li> <li>ALL EXITS MUST BE CONTINUOUS AND TERMINATE IN A PUBLIC WAY OR EXIT COURT LEADING TO A PUBLIC WAY OR AN APPROVED AREA OF REFUGE.</li> <li>WHENEVER THE BUILDING IS OCCUPIED, EXIT SIGNS SHALL BE ILLUMINATED SO THAT THEY ARE CLEARLY VISIBLE.</li> <li>PROVIDE PORTABLE FIRE EXTINGUISHERS AT EACH FIRE EXTINGUISHER CABINET AS SHOWN ON DRAWINGS. ADDITIONAL FIRE EXTINGUISHERS AS REQUIRED BY FIRE DEPARTMENT OR STATE FIRE MARSHALL FIELD INSPECTORS ARE N.I.C.</li> <li>GENERAL CONTRACTOR IS TO MAKE EXACT DETERMINATIONS AS TO THE LOCATION OF ALL EXISTING UTILITIES. DO NOT BEGIN WORK UNTIL THIS DETERMINATION HAS BEEN MADE. CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGE CAUSED BY FAILURE TO LOCATE AND PROTECT UTILITIES.</li> <li>PROVIDE RE-ROUTING OF EXISTING UTILITIES SERVING OCCUPIED AREAS AS REQUIRED TO MAINTAIN OPERATIONS.</li> <li>SUPPLY TEMPORARY ELECTRICAL POWER TO THE JOB SITE FOR USE BY ALL CONSTRUCTION TRADES PRIOR TO CONNECTION OF THE SPECIFIED ELECTRICAL WORK.</li> <li>NOTIFY OWNER AT LEAST SEVENTY-TWO HOURS PRIOR TO DISRUPTION OF UTILITIES.</li> <li>PATCH SURFACES WHERE AFFECTED BY INSTALLATION OF NEW MECHANICAL, ELECTRICAL AND STRUCTURAL ITEMS. MATCH EXISTING ADJACENT SURFACES AND FINISHES EXCEPT WHERE OTHERWISE NOTED OR INDICATED.</li> <li>THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING AS REQUIRED TO COMPLETE THE WORK OR TO MAKE ITS PARTS FIT TOGETHER PROPERLY. PATCHING OF FINISHED WORK ALREADY INSTALLED AS A RESULT BY ERRORS, CHANGES OR OTHER REASONS IS ALSO THE CONTRACTOR'S RESPONSIBILITY. THE REFINISHED SURFACES SHALL MATCH THE ADJACENT SURFACES FOR COLOR, TEXTURE AND MATERIAL.</li> <li>WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER-DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE, PRE-OR POST-TENSIONED LOCATE THE PRESTRESSED TENDON BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.</li> <li>PATCH AND REPAIR EXISTING FIRE-RATED ASSEMBLIES DAMAGED DURING DEMOLITION TO MAINTAIN RATED ASSEMBLY.</li> <li>ALL PENETRATIONS THROUGH FIRE RATED WALLS AND SHAFTS SHALL BE EQUIPPED WITH DAMPERS, SEALANTS, OR OTHER APPROPRIATE AND APPROVED UL LISTED ASSEMBLIES, MATERIALS AND METHODS SO AS TO MAINTAIN THAT RATINGS. ALL OPENINGS AT WINDOWS, OPENINGS FOR UTILITY PIPING AND WIRING, ETC., WITHIN THE AREA OF WORK SHALL BE CALKED AND SEALED.</li> </ol>	<p>IT IS THE INTENT OF THIS CONTRACT TO CONSTRUCT TENANT IMPROVEMENTS TO AN EXISTING MODULAR BUILDING. THE SCOPE OF SERVICES TO BE PROVIDED UNDER THIS CONTRACT, ARE AS FOLLOWS:</p> <ul style="list-style-type: none"> <li>MODIFICATIONS TO (E) ELECTRICAL SYSTEMS, LIGHTING, FIRE ALARM AND COMPONENTS</li> <li>MODIFICATIONS TO (E) MECHANICAL SYSTEMS, MECHANICAL GRILLS</li> <li>INTERIOR PAINTING</li> <li>REMOVE (E) CARPET AND FLOOR BASE; NEW VCT FLOORING AND BASE</li> <li>FINISH REFURBISHMENT</li> <li>SECURITY CAMERA UPDATE</li> <li>KEYLESS ENTRY UPDATE</li> </ul> <p><b>CODE ANALYSIS</b></p> <p>EXISTING BUILDING DATA SUMMARY:</p> <table border="1"> <tr> <td>EXISTING BUILDING DATA / OCCUPANCY:</td> <td></td> </tr> <tr> <td>OCCUPANCY TYPE (ENTIRE BUILDING)</td> <td>A-3/B</td> </tr> <tr> <td>CONSTRUCTION TYPE (602 CBC)</td> <td>TYPE V-B NON RATED</td> </tr> <tr> <td>FIRE SPRINKLER</td> <td>NO</td> </tr> <tr> <td>BUILDING HEIGHT ABOVE GRADE</td> <td>35'-0"</td> </tr> <tr> <td>SEPARATION ON SIDES</td> <td>3</td> </tr> <tr> <td>OCCUPANCY OF ROOMS 110 &amp; 111</td> <td>A3</td> </tr> </table> <p>EXISTING BUILDING AREA / STORES:</p> <table border="1"> <tr> <td>TOTAL BUILDING AREA</td> <td>17,806 S.F.</td> </tr> <tr> <td>STORES</td> <td>2</td> </tr> <tr> <td>TOTAL FIRST FLOOR AREA</td> <td>11,688 S.F.</td> </tr> <tr> <td>TOTAL SECOND FLOOR AREA</td> <td>6,118 S.F.</td> </tr> </table> <p>PROPOSED TENANT IMPROVEMENT AREA 2,240 S.F. ( ROOMS 110 &amp; 111)</p> <p><b>VICINITY MAP</b></p>	EXISTING BUILDING DATA / OCCUPANCY:		OCCUPANCY TYPE (ENTIRE BUILDING)	A-3/B	CONSTRUCTION TYPE (602 CBC)	TYPE V-B NON RATED	FIRE SPRINKLER	NO	BUILDING HEIGHT ABOVE GRADE	35'-0"	SEPARATION ON SIDES	3	OCCUPANCY OF ROOMS 110 & 111	A3	TOTAL BUILDING AREA	17,806 S.F.	STORES	2	TOTAL FIRST FLOOR AREA	11,688 S.F.	TOTAL SECOND FLOOR AREA	6,118 S.F.	<p><b>CLIENT:</b> MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT 1499 N. STATE STREET SAN JACINTO, CA 92583 TEL: (951) 698-5030 CONTACT: TODD FRANCO, DEAN OF FACILITIES PLANNING EMAIL: tfranco@msjc.edu</p> <p><b>ARCHITECT:</b> SGN ARCHITECTS 707 BROOKSIDE AVENUE REDLANDS, CA 92373 TEL: (951) 375-3030 CONTACT: MICHAEL STEPHENS, AIA, NCARB EMAIL: mstephens@sgnarch.com</p> <p><b>ELECTRICAL:</b> JCA ENGINEERING INC. 8048 PALM AVE. HIGHLAND, CA 92346 TEL: (909) 846-0223 CONTACT: JAMES J. CORNS EMAIL: james.corns@caeng.com</p> <p><b>VENDOR:</b> GARNER HOLT PRODUCTIONS, INC. 1255 RESEARCH DRIVE REDLANDS, CA 92374 TEL: (951) 799-3030 CONTACT: BILLY YUAN EMAIL: blyuan@garnerholtdesign.com</p> <p><b>GENERAL:</b></p> <table border="1"> <tr> <th>0.0</th> <th>TITLE SHEET</th> </tr> </table> <p><b>ARCHITECTURAL:</b></p> <table border="1"> <tr> <td>AS1.0</td> <td>CAMPUS PLAN</td> </tr> <tr> <td>A2.01</td> <td>DEMOLITION / REMODEL FLOOR PLANS, DETAILS, DOOR SCHEDULE</td> </tr> <tr> <td>A2.02</td> <td>EQUIPMENT PLAN / SCHEDULE, FINISH SCHEDULE &amp; DETAILS</td> </tr> <tr> <td>A2.03</td> <td>INTERIOR ELEVATIONS</td> </tr> <tr> <td>AS.01</td> <td>DEMOLITION / REMODEL REFLECTED CEILING PLANS, DETAILS</td> </tr> </table> <p><b>ELECTRICAL:</b></p> <table border="1"> <tr> <td>E-1.0</td> <td>ELECTRICAL SITE PLAN</td> </tr> <tr> <td>E-1.1</td> <td>ELECTRICAL BUILDING PLAN</td> </tr> <tr> <td>E-2.0</td> <td>SINGLE LINE DIAGRAM, LTO FIXTURE SCHEDULE, DEMOLITION PLAN AND LIGHTING PLAN</td> </tr> <tr> <td>E-3.0</td> <td>POWER, LOW VOLTAGE FIRE, ALARM FLOOR PLANS</td> </tr> </table> <p><b>MSJC REQUIREMENTS</b></p> <ol style="list-style-type: none"> <li>CONTRACTOR TO PROVIDE COORDINATION DRAWINGS SIGNED BY ALL MEP TRADES CONFIRMING MUTUAL COORDINATION TO ENSURE THAT THE OWNER RECEIVES A COMPLETE FUNCTIONAL SYSTEM.</li> </ol>	0.0	TITLE SHEET	AS1.0	CAMPUS PLAN	A2.01	DEMOLITION / REMODEL FLOOR PLANS, DETAILS, DOOR SCHEDULE	A2.02	EQUIPMENT PLAN / SCHEDULE, FINISH SCHEDULE & DETAILS	A2.03	INTERIOR ELEVATIONS	AS.01	DEMOLITION / REMODEL REFLECTED CEILING PLANS, DETAILS	E-1.0	ELECTRICAL SITE PLAN	E-1.1	ELECTRICAL BUILDING PLAN	E-2.0	SINGLE LINE DIAGRAM, LTO FIXTURE SCHEDULE, DEMOLITION PLAN AND LIGHTING PLAN	E-3.0	POWER, LOW VOLTAGE FIRE, ALARM FLOOR PLANS
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**SITE PLAN LEGEND**

AREA OF WORK

**CAMPUS PLAN**

**MAKERSPACE CONVERSION - SAN JACINTO CAMPUS**

MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
 BUILDING 100, ROOMS 110 & 111  
 1499 N. STATE STREET, SAN JACINTO, CA 92583

**MSJC**  
 Mt. San Jacinto College

**sgn**  
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PROJECT NUMBER	BID DOCUMENTS
21-5470-00	9/16/2021
PROJECT STATUS	DATE
PROJECT ISSUED	DESCRIPTION
REVISION	DATE
	DESCRIPTION

AS1.0

CONSULTANT:

SEALS

PROJECT NUMBER  
 BID DOCUMENTS  
 PROJECT STATUS  
 PROJECT ISSUED  
 REVISION  
 DATE  
 DESCRIPTION

# DOOR SCHEDULE

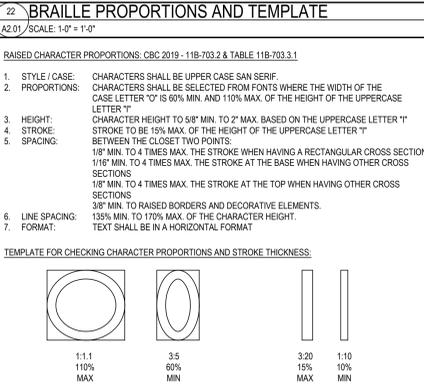
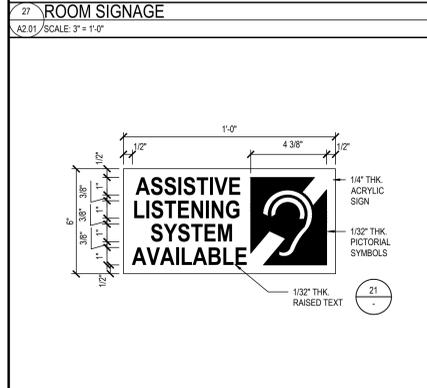
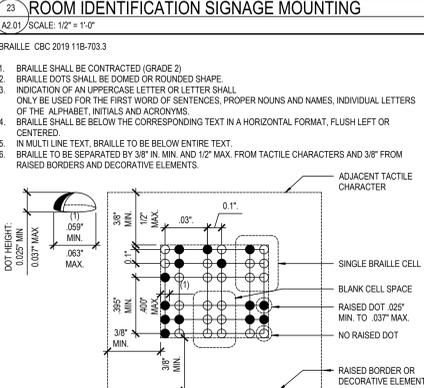
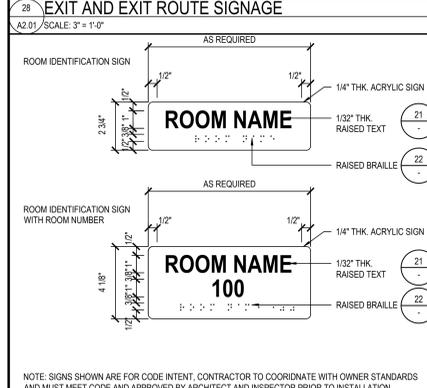
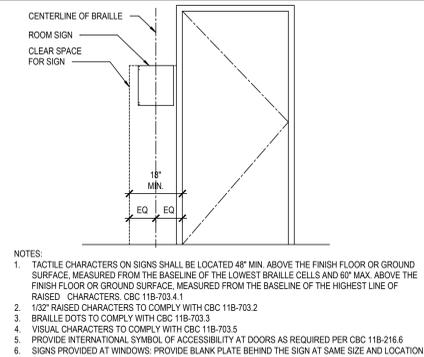
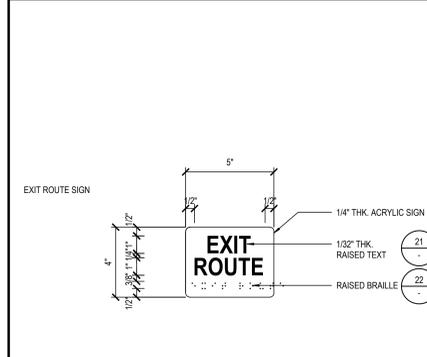
#	ROOM NO.	DOOR SIZE			TYPE	CORE	MATERIAL	DOOR FINISH	FRAME & FINISH	DETAILS				FIRE RATING	HOW GROUP	REMARKS
		WIDTH	HEIGHT	THICK						THRESH	JAMB	JAMB	HEAD			
115.1	115	(E)	(E)	(E)	(E) MTL	*	(E) MTL	P	(E) MP	*	*	*	*	01	R1	
115.2	115	(E)	(E)	(E)	(E) MTL	*	(E) MTL	P	(E) MP	*	*	*	*		(E) R2	
116.1	116	(E)	(E)	(E)	(E) MTL	*	(E) MTL	P	(E) MP	*	*	*	*		(E) R2	
116.2	116	(E)	(E)	(E)	(E) MTL	*	(E) MTL	P	(E) MP	*	*	*	*		(E) R2	
117.1	117	(E)	(E)	(E)	(E) MTL	*	(E) MTL	P	(E) MP	*	*	*	*		(E) R2	
117.2	117	(E)	(E)	(E)	(E) MTL	*	(E) MTL	P	(E) MP	*	*	*	*		(E) R2	
118.1	118	(E)	(E)	(E)	(E) MTL	*	(E) MTL	P	(E) MP	*	*	*	*	01	R1	

**DOOR ABBREVIATIONS:**  
 MATERIAL:  
 (E) MTL = EXISTING METAL  
 DOOR TYPE:  
 (E) MTL = EXISTING METAL  
 DOOR FINISH:  
 P = SAND AND PAINT  
 FRAME & FINISH:  
 (E) MP = EXISTING METAL / SAND AND PAINT  
**FRAMES NOTE:**  
 1. ALL FRAMES (E) ARE HOLLOW METAL.  
**REMARKS:**  
 R1 ACCESS CONTROLLED DOOR. CONNECT LOCKSET TO CARD READER. MODIFY HINGES FOR WIRED LOCKSET. DRILL DOORS AND RUN WIRE FOR ACCESS CONTROL SYSTEM.  
 R2 EXISTING DOOR HARDWARE TO REMAIN.  
**HARDWARE GROUP:**  
 01 ACCESS CONTROL. READER, MORTISE LEVER, O.H. CLOSER  
 • C400 READER: SCHLAGE MT15  
 • ELECTRIC LOCKSET: SCHLAGE CBR-8891-626  
 • MORTISE CYLINDER: SCHLAGE E651-606  
 • ELECTRIC HINGE: 3081 4.5 x 4.5 TWB-626. R&R (E) HINGES

## SIGN LEGEND

SYMBOL	SIGN	DETAIL
ER	EXIT ROUTE	28/A2.01
RIDN	ROOM IDENTIFICATION	27/A2.01
ALS	ASSISTIVE LISTENING	26/A2.01

NOTE: REFER TO DETAIL 23A2.01 FOR SIGN MOUNTING LOCATION

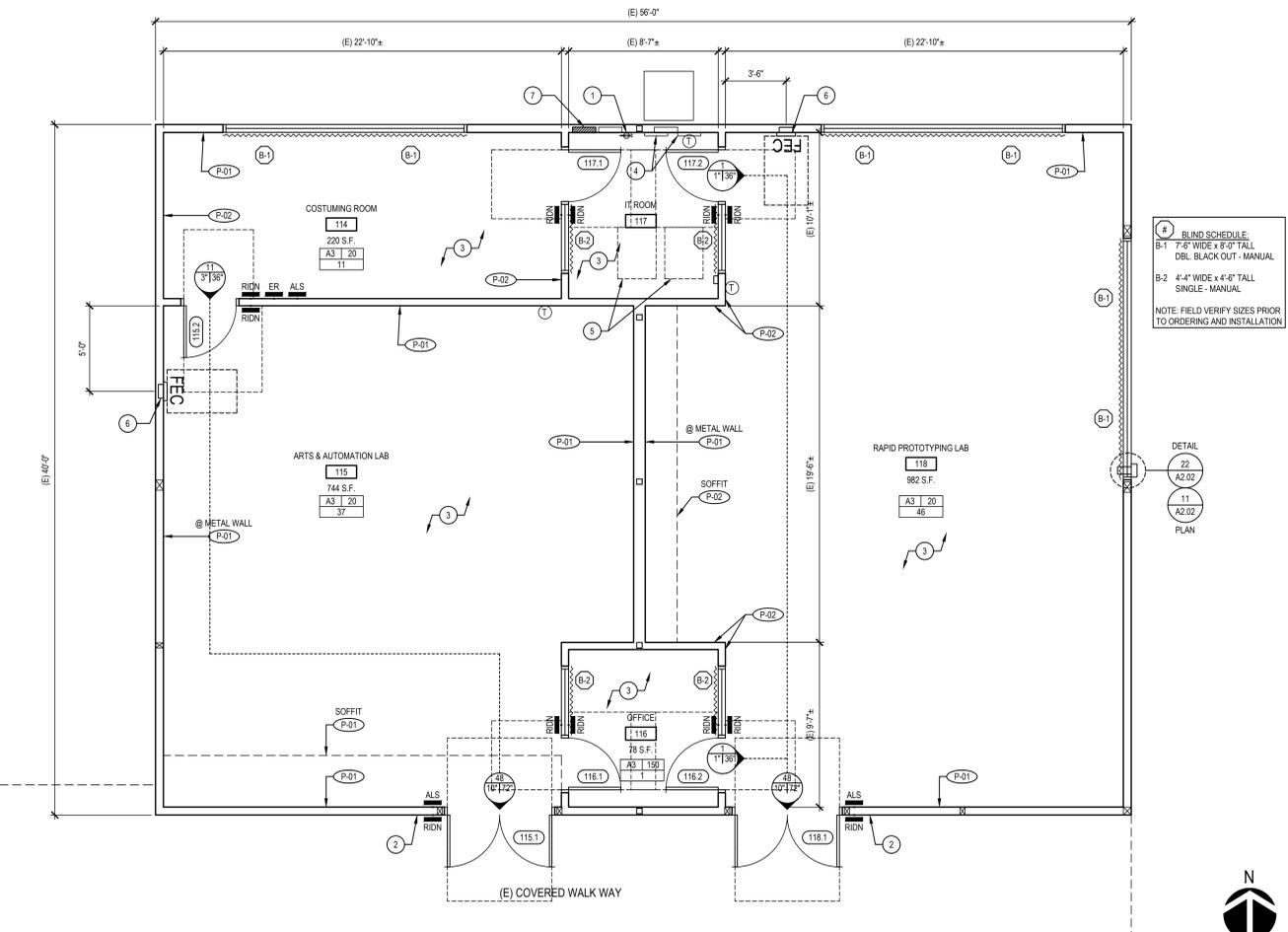


26 ASSISTIVE LISTENING SIGN  
A2.01/SCALE: 3" = 1'-0"

21 CHARACTER PROPORTIONS  
A2.01/SCALE: 6" = 1'-0"

## 18 DEMOLITION FLOOR PLAN

A2.01/SCALE: 1/4" = 1'-0"



16 REMODEL FLOOR PLAN  
A2.01/SCALE: 1/4" = 1'-0"

## DEMOLITION FLOOR PLAN KEYNOTES

- (E) ELECTRICAL CONTROL PANEL TO REMAIN. PROTECT IN PLACE
- (E) ELECTRICAL PANEL TO REMAIN. PROTECT IN PLACE
- REMOVE (E) SEMI-RECESSED FIRE EXTINGUISHER CABINET. STORE FOR REUSE
- (E) THERMOSTAT TO REMAIN. PROTECT IN PLACE
- REMOVE (E) BLINDS & HARDWARE
- (E) WINDOWS TO REMAIN. PROTECT IN PLACE
- (E) HVAC UNIT TO REMAIN. PROTECT IN PLACE
- REMOVE (E) SURFACE MOUNTED FIRE EXTINGUISHER
- REMOVE (E) SURFACE MOUNTED WIRE MOLD. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION
- REMOVE (E) SURFACE MOUNTED ELECTRICAL RACEWAY TRACK
- REMOVE (E) TACKBOARD
- REMOVE (E) MARKER BOARD
- REMOVE (E) WALL MOUNTED PROJECTOR SCREEN
- REMOVE (E) FULL WALL HEIGHT TACKABLE WALL SURFACE AND HARDWARE
- REMOVE (E) TALL CABINET. RETURN TO OWNER
- REMOVE (E) WOOD BLOCKS & ANCHORED RACEWAY
- REMOVE (E) CASEWORK, FILE CABINETS & MISCELLANEOUS ITEMS. RETURN TO OWNER
- REMOVE (E) IT RACKS & FLOORING UNDER RACK. SAVE FOR REINSTALLATION
- REMOVE (E) WALL HVAC SUPPLY AND RETURN GRILL. SAVE FOR REINSTALLATION
- REMOVE (E) WALL MOUNTED PENCIL SHARPENER. RETURN TO OWNER
- REMOVE (E) WALL MOUNTED SOAP/SANITIZER DISPENSER. RETURN TO OWNER
- REMOVE (E) SURFACE MOUNTED CLOCK
- REMOVE (E) FLOOR FINISHES & WALL BASE
- REMOVE (E) CONDUIT THRU WALL
- REMOVE (E) CABLE TRAY
- REMOVE (E) IT RACKS. RETURN TO OWNER
- (E) DOOR, HARDWARE AND FRAME TO REMAIN. PROTECT IN PLACE
- REMOVE (E) WALL MOUNTED SIGN & FASTENERS

## DEMOLITION GENERAL NOTES

- DEMOLITION GENERAL NOTES APPLY TO ALL DEMOLITION SHEETS.
- COORDINATE DEMOLITION AND REMODEL EFFORTS WITH ARCHITECT AND OWNER'S REPRESENTATIVES. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS AND TO PROVIDE BUILDING USER'S SAFETY. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH OWNER'S REPRESENTATIVE.
- COORDINATE DISRUPTION OF UTILITY SERVICES WITH OWNER AND AS SPECIFIED.
- MAINTAIN A SECURE AND WEATHER-TIGHT ENCLOSURE.
- VERIFY EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS AND NOTIFY ARCHITECT OF DISCREPANCIES
- REMOVE EXISTING CEILING TILES, MARKERBOARDS, ETC. IN THEIR ENTIRETY AND AS REQUIRED TO EXECUTE DEMOLITION AND CONSTRUCTION WORK DESCRIBED ON THE DRAWINGS.
- PROVIDE PROTECTION FOR EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO DEMOLITION OF CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
- REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
- EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
- VERIFY AND MAINTAIN LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF SERVICE.
- PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR REROUTING OF NEW OR EXISTING DUCTWORK, CONDUIT, ETC. AS REQUIRED. MATCH FINISH OF NEW OR EXISTING ADJACENT SURFACES.
- SEE ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
- REMOVE WALL FINISHES TO ACCOMMODATE ELECTRICAL, MECHANICAL AND LOW VOLTAGE WORK.
- REMOVE ALL (E) WINDOW BLINDS / COVERINGS. SAVE FOR REINSTALLATION. COORDINATE W/ OWNER BEFORE REMOVAL.
- REMOVE ALL (E) WALL MOUNTED FIRE EXTINGUISHERS @ WORK AREAS. SAVE FOR REINSTALLATION.

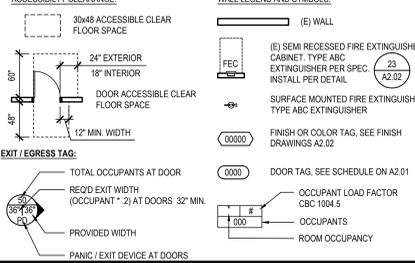
## FLOOR PLAN KEYNOTES

- SURFACE MOUNTED FIRE EXTINGUISHER
- SECURITY CARD READER. MODIFY (E) EXTERIOR FINISH TO ACCEPT J-BOX & WIRING
- FLOOR FINISHES & WALL BASE PER FINISH SCHEDULE ON SHEET A2.02
- CLEAN UP, REPAINT WHITE (E) WALL LOUVERS. REINSTALL
- REINSTALL (E) IT RACKS. RE CONNECT TO NETWORK
- REINSTALL (E) SEMI RECESS FIRE EXTINGUISHER CABINET. FIRE EXTINGUISHER PER 10 44 13
- ELECTRICAL PANEL. SEE E-1.1

## FLOOR PLAN GENERAL NOTES

- WHERE EXISTING FINISHES, FACILITIES AND SURFACES ARE TO REMAIN AND ARE DISTURBED, DAMAGED, OR REMOVED DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR IS TO REPAIR OR REPLACE AS NECESSARY TO MATCH EXISTING. ALL NEW MATERIALS SHALL MATCH EXISTING IN ALL RESPECTS.
- REPAIR ALL WALL SURFACES / MATERIALS WHERE FINISHES OR SCHEDULED ITEMS WERE REMOVED DURING RENOVATION WORK.
- PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE OR EQUIPMENT SHALL BE REPAIRED.
- ALL EXISTING AREAS TO REMAIN THAT ARE DAMAGED BY DEMOLITION OR NEW CONSTRUCTION WORK SHALL BE PATCHED TO MATCH EXISTING ADJACENT AREA IN MATERIAL, FINISH AND COLOR.
- ANY PROJECTION OR SURFACE MOUNTED ITEMS BEING ABANDONED SHALL BE REMOVED, CAPPED AND CONCEALED BEHIND FINISHED SURFACES UNLESS NOTED OTHERWISE.
- IN ALL AREAS WHERE DEMOLITION CAUSES UNEVENNESS OR VOIDS IN THE FLOOR, PATCH AND LEVEL THE FLOOR WITH THE EXISTING SLAB AND/OR ADJACENT SURFACE PRIOR TO INSTALLATION OF FINISH FLOOR.
- REMOVE DAMAGED PLASTER AND DRYWALL BEADS AND BEADS AT EXISTING CORNERS WHERE NEW PARTITIONS ALIGN WITH EXISTING FINISH.
- PREPARE ALL SURFACES AS REQUIRED TO RECEIVE NEW FINISH.
- FINISH: PREPARE SUB-FLOOR AND LEAVE IN BROOM CLEAN CONDITION IN ORDER TO RECEIVE CARPET OR OTHER FLOORING. FLOOR SHALL BE LEVEL AND FREE OF PIPS, DIMPLES AND JOINTS THAT WOULD SHOW THROUGH FINISHED INSTALLATION.

## LEGEND



CONSULTANT:

DEMOLITION / REMODEL FLOOR PLANS, DETAILS, DOOR SCHEDULE

MAKERSPACE CONVERSION - SAN JACINTO CAMPUS

MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
 BUILDING 100, ROOMS 110 & 111  
 1499 N. STATE STREET, SAN JACINTO, CA 92583

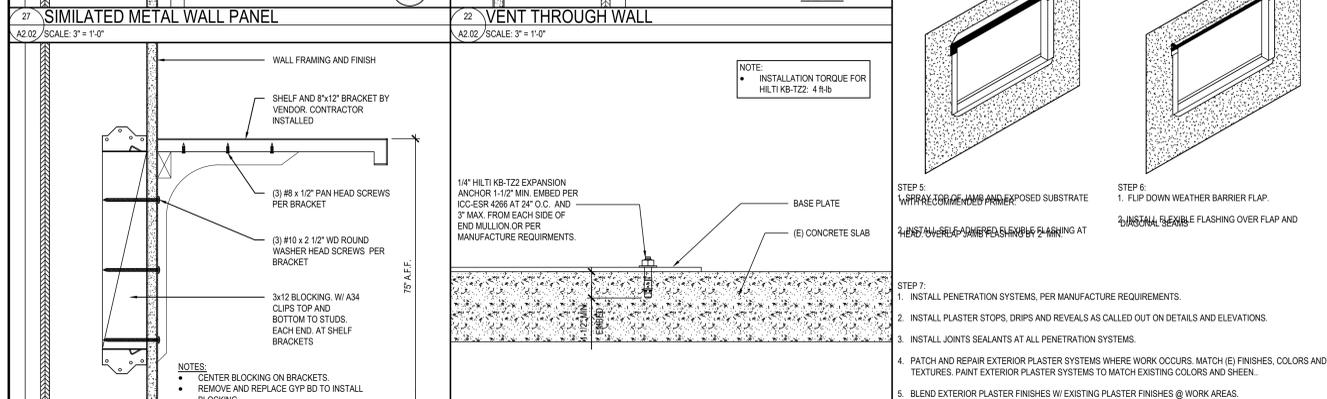
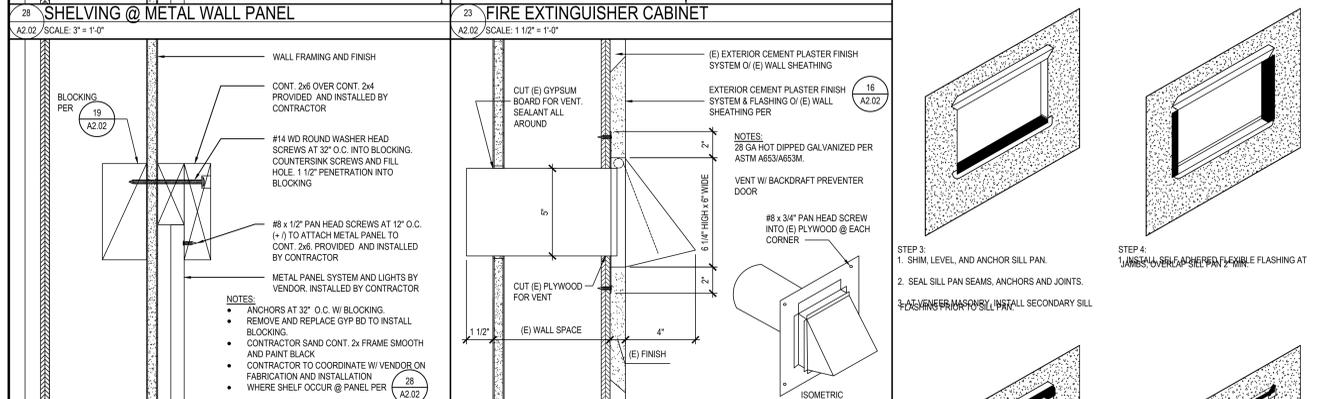
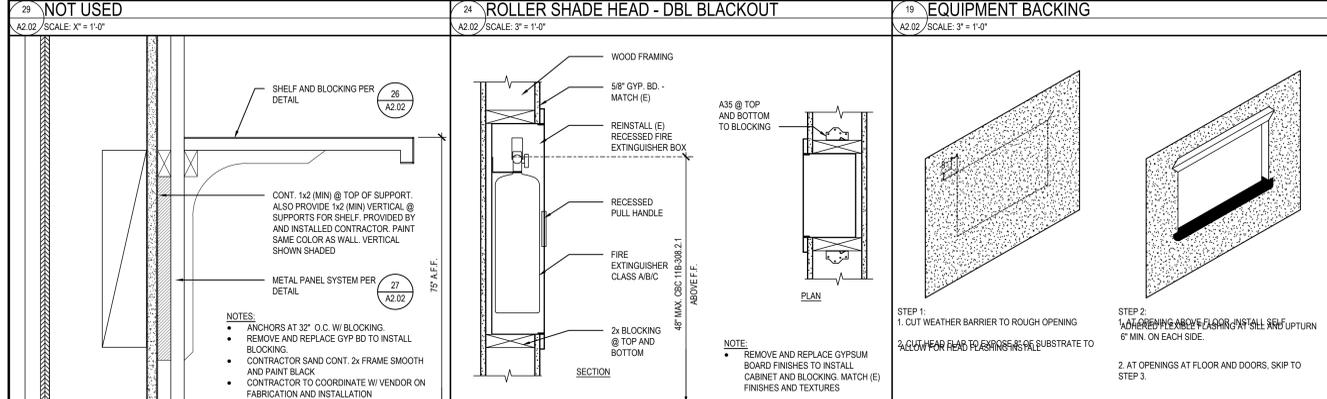
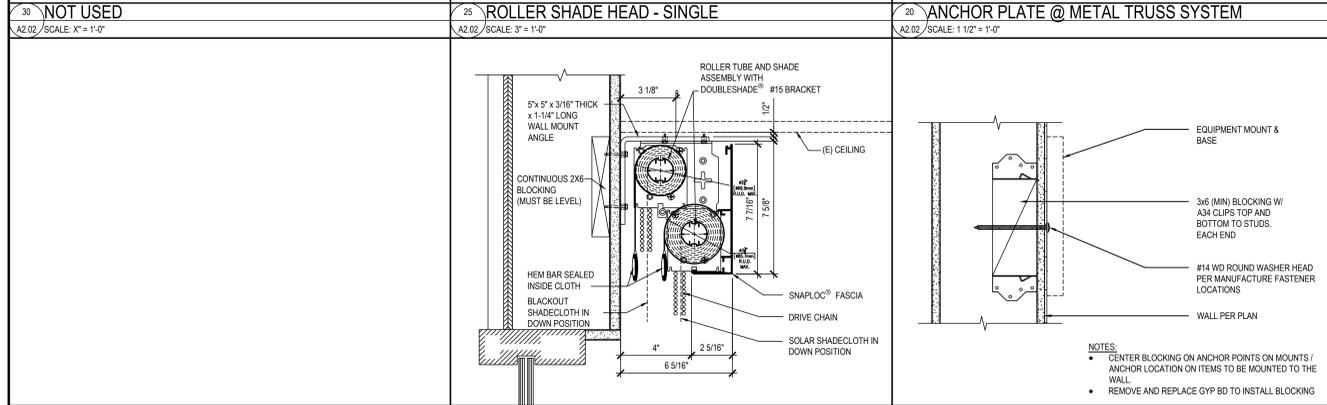
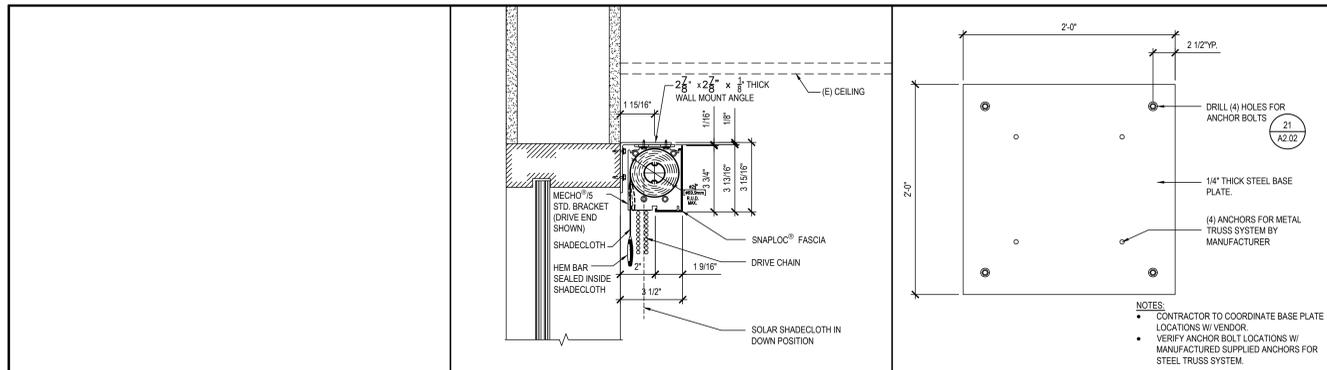
**MSJC**  
 Mt. San Jacinto College

REGISTERED ARCHITECT  
 STATE OF CALIFORNIA

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PROJECT NUMBER: 21-1411-00  
 PROJECT STATUS: BID DOCUMENTS  
 PROJECT ISSUED: 9/16/2021  
 REVISION: DATE: DESCRIPTION:

A2.01



### FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		WAINSCOT		CEILING		NOTES & REMARKS	
				MATL.	FINISH	MATL.	FINISH	MATL.	FINISH	MATL.	FINISH	HT.	FINISH	MATL.	FINISH		HT.
114	COSTUMING ROOM	VCT-01	RB-01	GBW	P-01	GBW	P-02	GBW	GRAPHIC	GBW	P-02	-	-	ACT	ACT-01	10'-0"	PAINT P-04, REPLACE ONLY DAMAGED OR MISSING TILES W/ ACT-01
115	ARTS & AUTOMATION LAB	VCT-01	RB-01	GBW	P-01	GBW	P-02	GBW	GRAPHIC / MTL	GBW	P-01	-	-	ACT	ACT-01	10'-0"	PAINT P-04, REPLACE ONLY DAMAGED OR MISSING TILES W/ ACT-01
116	OFFICE	VCT-01	RB-01	GBW	P-01	GBW	P-01	GBW	P-01	GBW	P-01	-	-	ACT	ACT-01	8'-6"	PAINT P-04, REPLACE ONLY DAMAGED OR MISSING TILES W/ ACT-01
117	IT ROOM	VCT-02	RB-01	GBW	P-01	GBW	P-01	GBW	P-01	GBW	P-01	-	-	ACT	ACT-01	8'-6"	PAINT P-04, REPLACE ONLY DAMAGED OR MISSING TILES W/ ACT-01
118	RAPID PROTOTYPING LAB	VCT-01	RB-01	GBW	P-01	GBW	GRAPHIC	GBW	P-01	GBW	GRAPHIC / MTL	-	-	ACT	ACT-01	10'-0"	PAINT P-04, REPLACE ONLY DAMAGED OR MISSING TILES W/ ACT-01

**FINISH SCHEDULE ABBREVIATIONS:**  
 ACT ACOUSTIC CEILING TILES  
 CG CORNER GUARD  
 VCT VINYL COMPOSITION TILE  
 GBW GYPSUM WALL BOARD  
 P PAINT  
 RB RUBBER BASE  
 T-BAR SUSPENDED T-BAR GRID/CEILING

**FINISH SCHEDULE NOTES:**  
 1. VERIFY ALL FINISHES WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.  
 2. REFER TO REFLECTED CLG. PLAN FOR ADDITIONAL NOTES.  
 3. REFER TO INTERIOR ELEV. FOR ADDITIONAL NOTES.  
 4. ALL FINISHES SHALL COMPLY WITH CBC, CFC, & TITLE 19.  
 5. ALL FINISH MATERIALS TO BE TESTED IN ACCORDANCE WITH CBC SECTION 902 & IN ACCORDANCE WITH CBC SECTIONS 803, 804, AND TABLES 8A & 8B.  
 6. REFER TO SHEET A2.01 FOR FINISHES.

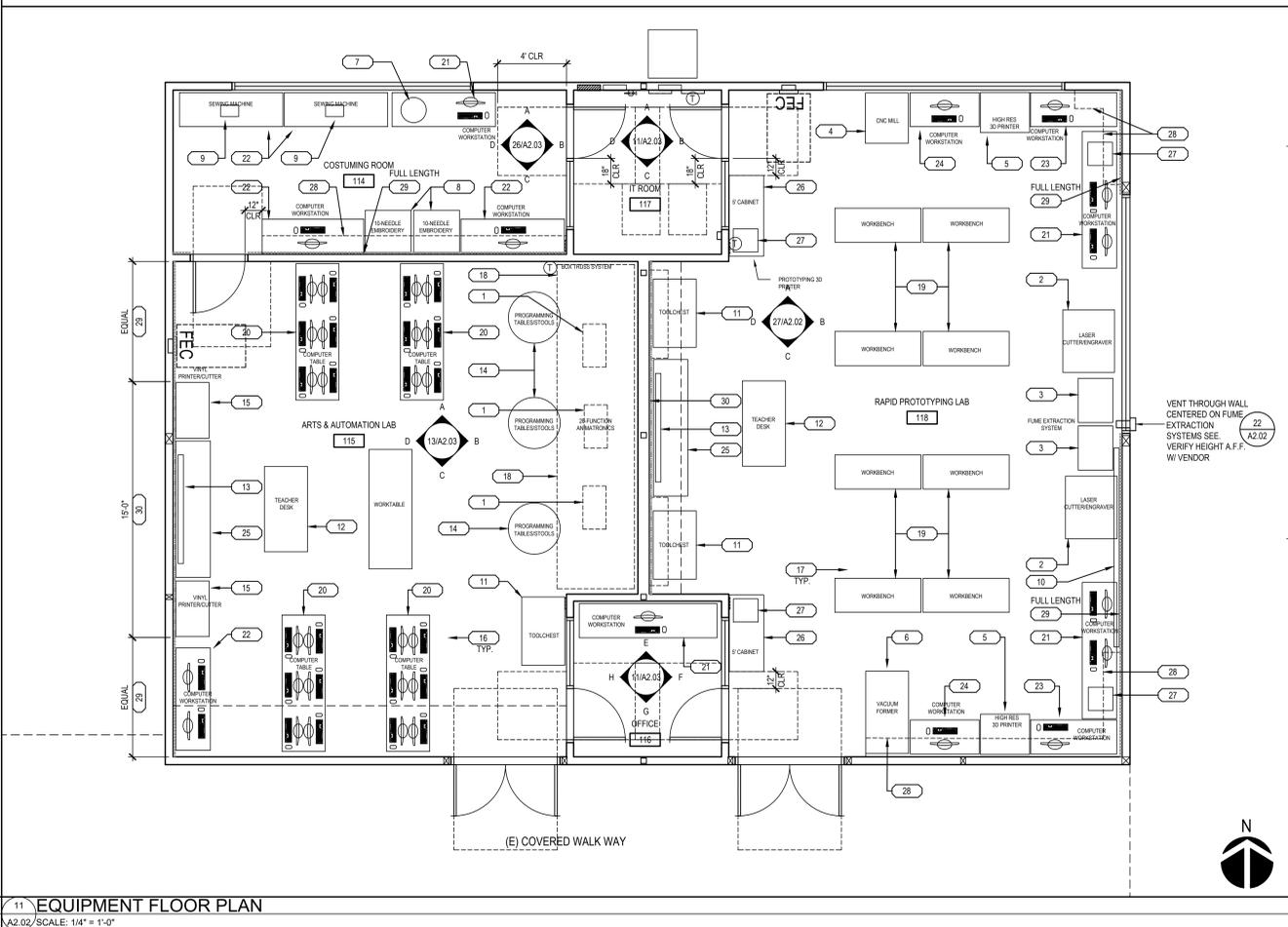
**FINISH PLAN SYMBOLS:**  
 [XX-01] FLOOR FINISH

**FINISH LEGEND:**  
 P-01 PAINT: INT. WALLS: SHERWIN WILLIAMS, COLOR AS SELECTED BY OWNER  
 P-02 PAINT: INT. WALLS: (ACCENT) BERRI PAINT #P510 BEACON BLUE (SEE SHEET A2.01 ALSO)  
 P-03 PAINT: DOORS, FRAMES AND WINDOW FRAMES, COLOR AS SELECTED BY OWNER  
 P-04 PAINT: ACOUSTICAL TILES AND GRID; BLACK FLAT PAINT, ENTIRE CEILING  
 RB-01 RUBBER BASE: BURKE 4" HIGH WALL BASE - COLOR AS SELECTED BY OWNER  
 ACT-01 ACOUSTICAL CEILING TILES: 2x4" ARMSTRONG, SCHOOL ZONE FINE FIGURED SQUARE LAY-IN  
 CG-01 CORNER GUARD: INPRO, CLEAR CORNER GUARDS @ ALL EXTERIOR CORNERS WITHIN INT. SPACES  
 VCT-01 VCT: ARMSTRONG STANDARD EXCELON 12"x12" TILE - COLOR AS SELECTED BY OWNER  
 VCT-02 VCT: ARMSTRONG EXCELON SDT STATIC DISSIPATIVE 12"x12" TILE - COLOR AS SELECTED BY OWNER

**NOTES:**  
 • ALL PAINT SHALL BE SEMI GLOSS PAINT, UNLESS NOTED.  
 • REFER TO FLOOR PLAN SHEET A2.01 FOR PAINT CLARIFICATIONS ON WALLS & LOCATIONS

### EQUIPMENT SCHEDULE

EQUIPMENT NO.	EQUIPMENT TYPE	QUANTITY	POWER REQUIREMENTS	VENDOR INSTALL	CONTRACTOR INSTALL	REMARKS
1	28-FUNCTION ANIMATRONIC FIGURE	3	-	X		
2	LASER CUTTER/ENGRAVER	1	110V 11A 200/200VA	X	X	CONTRACTOR TO CUT (1) 4" DIAMETER HOLE CENTERED ON WALL 6" ABOVE FLOOR
3	LASER CUTTER/ENGRAVER FUME EXTRACTION SYSTEM	2	-	X		
4	CNC MILLING MACHINE	1	100V 240V / 1.5A 50/60Hz	X		
5	HIGH RESOLUTION 3D PRINTER BUNDLE (PRINTER & CLEAN STATION)	2	100V 240V / 1.5A 50/60Hz	X		
6	VACUUM FORMER SYSTEM	1	208-240V / 20A	X		
7	LASER SCANNING WORKSTATION	1	-	X		
8	10-NEEDLE EMBROIDERY MACHINE	2	-	X		
9	SEWING MACHINES	2	110V	X		
10	DIGITAL MEDIA/DESIGN DISPLAY STATION	1	-		X	VENDOR WILL PROVIDE MONITOR AND MOUNT FOR CONTRACTOR INSTALLATION
11	44" TOOL CHEST W/ 300 PIECE HAND AND POWER TOOL SET	3	-	X		
12	TEACHING STATION	2	-	X		
13	TEACHING TECHNOLOGY PACKAGE (86" MONITOR W/ MOUNT, 3D MODELING LAPTOP, APPLE TV, LASER PRINTER, DOCUMENT CAMERA AND PENCIL SHARPENER)	2	MONITOR ACT 120V, 50/60Hz	X	X	VENDOR WILL PROVIDE 86" MONITOR AND MOUNT FOR CONTRACTOR INSTALLATION
14	CUSTOM INDUSTRIAL ROUND ANIMATRONIC PROGRAMMING TABLE	3	-	X		
15	VINYL PRINTER/CUTTER	2	108-240V / 1.5A 50/60Hz	X		
16	CUSTOM POWDER COATED STUDENT CHAIRS	36	-	X		
17	CUSTOM POWDER COATED STUDENT STOOLS	36	-	X		
18	TRUSS AND LIGHTING SYSTEM W/ THEATRICAL CURTAIN AND GREEN SCREEN	1	-	X		COORDINATE BASE PLATE LOCATIONS W/ VENDOR
19	MOBILE WORK BENCH (24"x60")	8	-	X		
20	MOBILE COMPUTER WORK STATION (30"x36")	4	-	X		
21	MOBILE COMPUTER WORK STATION (24"x32")	4	-	X		
22	MOBILE COMPUTER WORK STATION (24"x32")	5	-	X		
23	MOBILE COMPUTER WORK STATION (24"x32")	2	-	X		
24	MOBILE COMPUTER WORK STATION (24"x32")	2	-	X		
25	MOBILE COUNTER/CABINET STORAGE UNIT (24"x36")	2	-	X		
26	MOBILE COUNTER/CABINET STORAGE UNIT (24"x36")	2	-	X		
27	PROTOTYPING 3D PRINTER BUNDLE	2	108-240V 3.5A 10A 50/60Hz	X		
28	WALL MOUNTED SHELF W/ BRACKETS @ 32" O.C. - 75" A.F.F.	4	-	X	X	VENDOR WILL PROVIDE SHELF AND BRACKETS. CONTRACTOR TO INSTALL SHELF AND BRACKET AND BACKING PER DETAIL
29	VINYL WALL GRAPHIC	5	-	X		VENDOR PROVIDED / INSTALLED. MAXIMUM LIGHT ORANGE PEEL WALL FINISH ON WALL. CONTRACTOR TO CORRECT (E) FINISH TO ACCEPT WALL GRAPHIC. SEE INTERIORS ON SHT. A2.03
30	SIMULATED GALVANIZED ACCENT WALL W/ LED STRIP LIGHTS & SPOT ACCENT LIGHTS	2	-	X	X	VENDOR WILL PROVIDE METAL PANEL AND LIGHTS FOR CONTRACTOR FABRICATION / INSTALLATION. SEE DETAIL
31	POWER SUPPLY W/ CORD, CEILING MOUNTED	PER A3.01	110V	X	X	VENDOR WILL PROVIDE UNIT FOR CONTRACTOR INSTALLATION. SEE PAGE A3.01 FOR LOCATIONS AND DETAIL



CONSULTANT:

EQUIPMENT PLAN / SCHEDULE, FINISH SCHEDULE & DETAILS

MAKERSPACE CONVERSION - SAN JACINTO CAMPUS

MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
BUILDING 100, ROOMS 110 & 111  
1499 N. STATE STREET, SAN JACINTO, CA 92583



**sgn**  
ARCHITECTS

PROJECT NUMBER: 21-5470-00  
PROJECT STATUS: BID DOCUMENTS  
PROJECT ISSUED: 9/16/2021  
REVISION: DATE DESCRIPTION

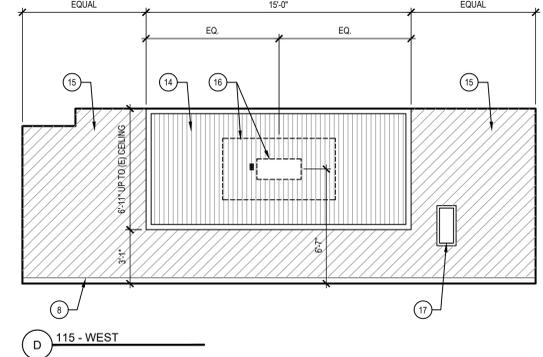
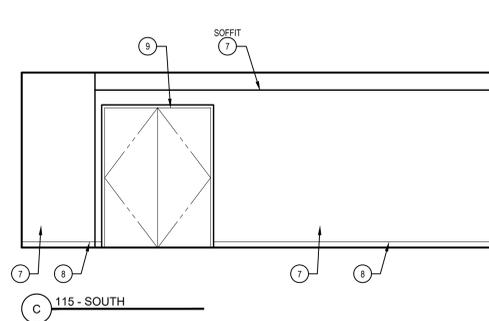
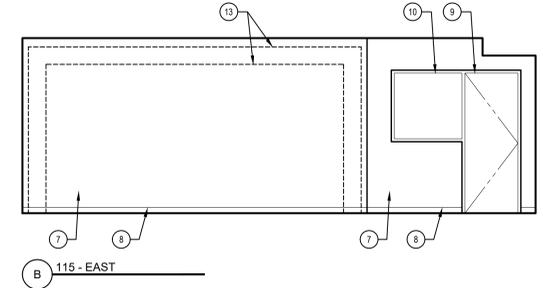
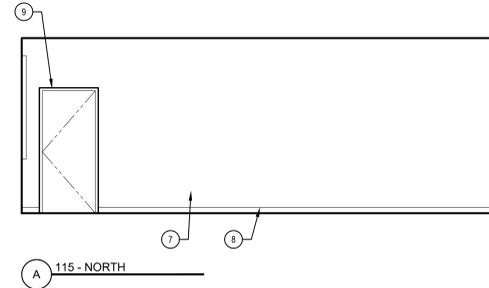
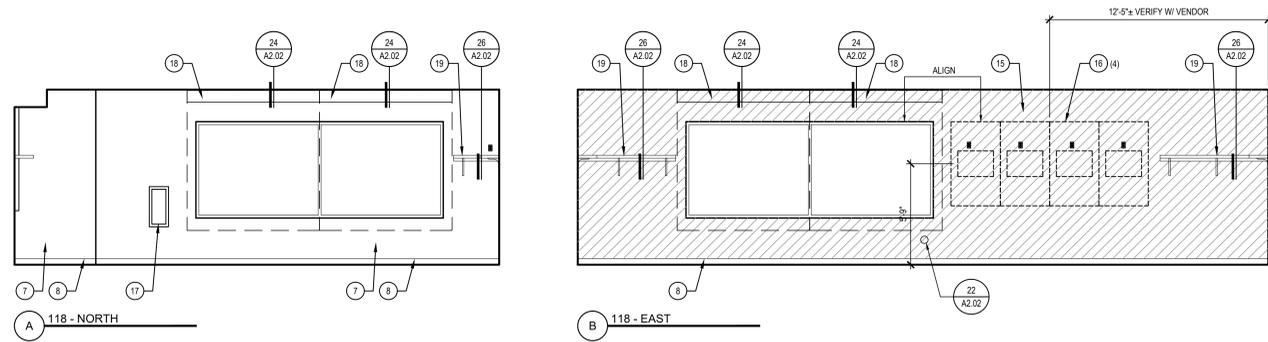
INTERIOR ELEVATION KEYNOTES

INTERIOR GENERAL NOTES

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1. (E) ELECTRICAL CONTROL PANEL TO REMAIN. PROTECT IN PLACE</li> <li>2. (E) ELECTRICAL PANEL TO REMAIN. PROTECT IN PLACE</li> <li>3. ELECTRICAL PANEL. SEE SHEET E-1.1</li> <li>4. (E) THERMOSTAT</li> <li>5. WALL MOUNTED FIRE EXTINGUISHER</li> <li>6. HVAC WALL LOUVERS</li> <li>7. GYPSUM BOARD PAINTED</li> <li>8. WALL BASE</li> <li>9. PAINT (E) DOOR AND FRAME - ACCENT COLOR</li> <li>10. PAINT (E) WINDOW FRAME - ACCENT COLOR</li> <li>11. ROLLER SHADE - SINGLE - MANUAL</li> <li>12. REINSTALL (E) IT RACK</li> <li>13. TRUSS AND LIGHTING SYSTEM PROVIDED AND INSTALLED BY VENDOR. BASE PLATE ANCHORS BY CONTRACTOR</li> <li>14. METAL WALL PANEL PER DETAIL. OMIT METAL WALL PANEL @ MONITOR MOUNT <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">27<br/>A2.02</span></li> </ul> | <ul style="list-style-type: none"> <li>15. WALL GRAPHIC. VENDOR PROVIDED AND INSTALLED</li> <li>16. MONITOR AND MOUNT W/ BACKING PER DETAIL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">19<br/>A2.02</span></li> <li>17. REINSTALL SEMI RECESSED FIRE EXTINGUISHER CABINET</li> <li>18. ROLLER SHADE - DOUBLE / BLACKOUT - MANUAL</li> <li>19. WALL MOUNTED SHELF AND BRACKETS. VENDOR PROVIDED, CONTRACTOR INSTALLED</li> <li>20. METAL WALL AND SHELVES PER DETAIL. OMIT METAL WALL PANEL @ MONITOR MOUNT <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">27<br/>A2.02</span></li> </ul> |
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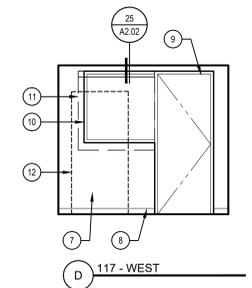
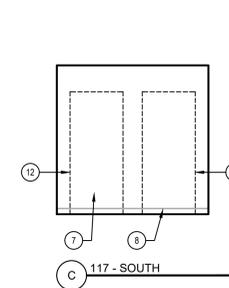
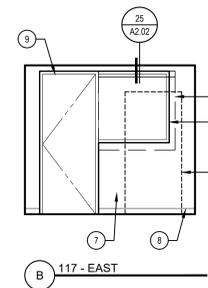
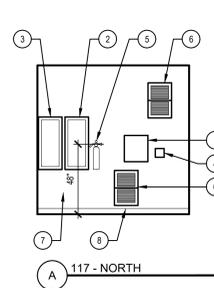
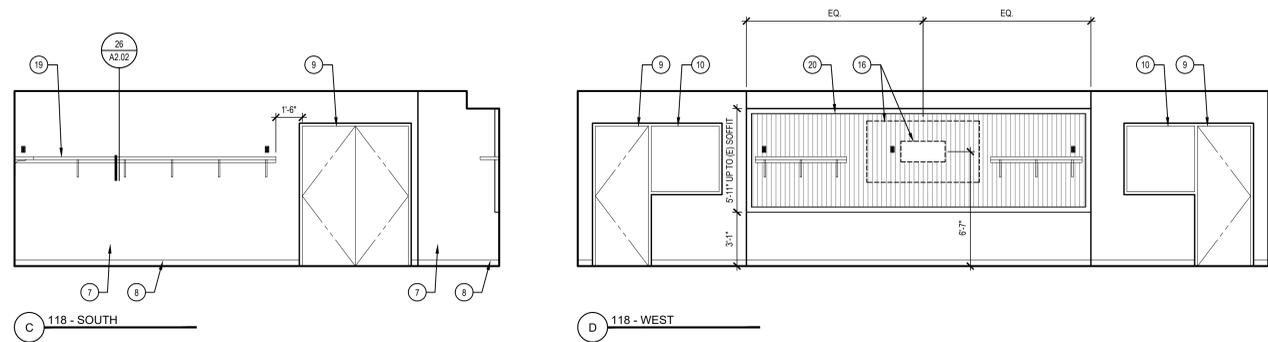
- 1. CONTRACTOR SHALL COORDINATE ALL WALL MOUNTED ITEMS PROVIDED BY VENDOR FOR LOCATION, BLOCKING, SUPPORT, ELECTRICAL & LOW VOLTAGE CONNECTIONS.
- 2. CONTRACTOR SHALL COORDINATE W/ VENDOR FOR FIELD FABRICATED ITEMS WHICH VENDOR IS SUPPLYING COMPONENTS FOR THOSE ITEMS. CONTRACTOR TO PROVIDE BLOCKING FOR ANCHORAGE FOR WALL MOUNTED ITEMS.
- 3. PREPARE WALL SURFACES TO RECEIVE WALL GRAPHICS.

CONSULTANT:



115 - ARTS & AUTOMATION LAB INTERIOR ELEVATIONS

A2.03 / SCALE: 1/4" = 1'-0"

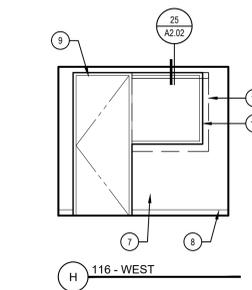
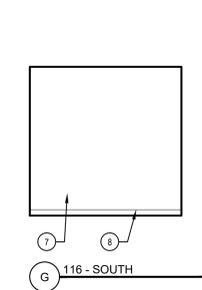
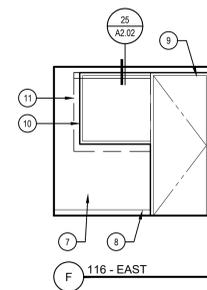
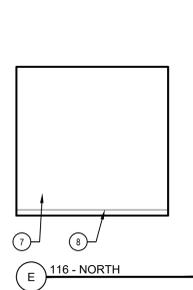
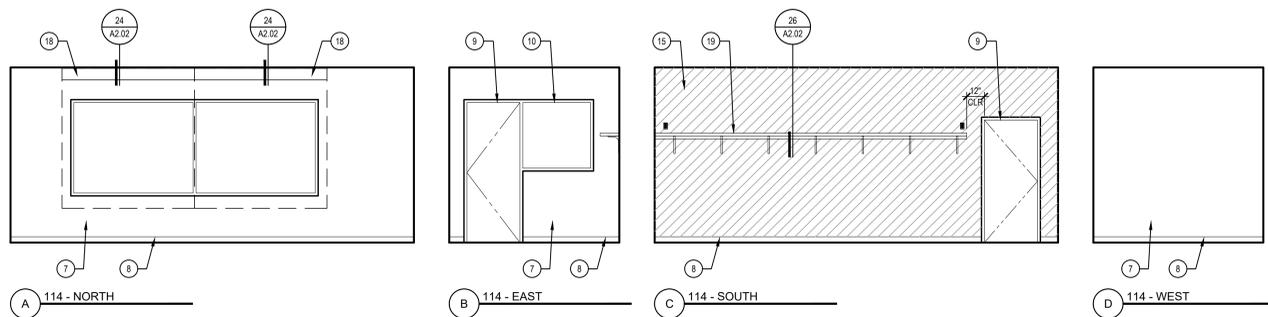


117 - OFFICE/3D SCANNING ROOM INTERIOR ELEVATIONS

A2.03 / SCALE: 1/4" = 1'-0"

118 - RAPID PROTOTYPING LAB INTERIOR ELEVATIONS

A2.03 / SCALE: 1/4" = 1'-0"



116 & 117 - OFFICE/3D SCANNING ROOM INTERIOR ELEVATIONS

A2.03 / SCALE: 1/4" = 1'-0"

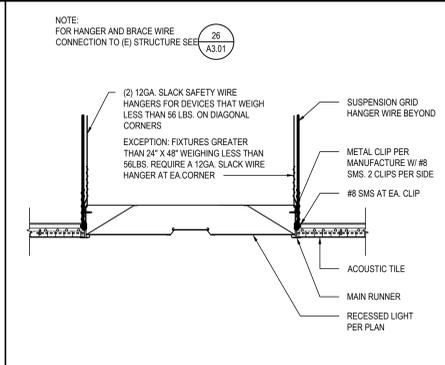
INTERIOR ELEVATIONS  
 MAKERSPACE CONVERSION - SAN JACINTO CAMPUS  
 MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
 BUILDING 100, ROOMS 110 & 111  
 1499 N. STATE STREET, SAN JACINTO, CA 92583



SEALS:

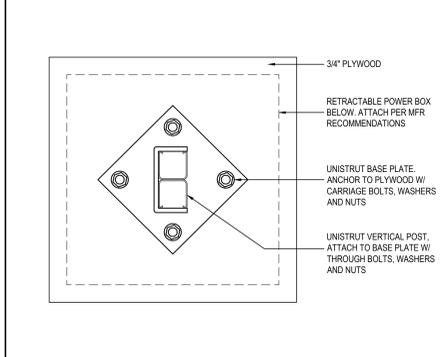


PROJECT NUMBER: 21-5410-00  
 PROJECT STATUS: BID DOCUMENTS  
 PROJECT ISSUED: 9/16/2021  
 REVISION: DATE DESCRIPTION



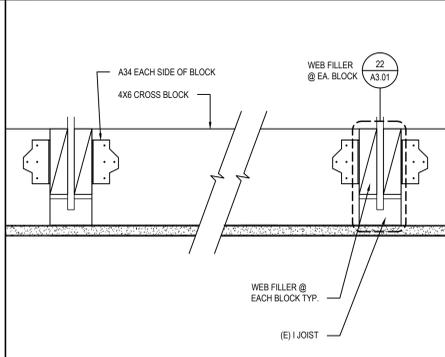
30 NOT USED  
A3.01 / SCALE: 1/4" = 1'-0"

25 RECESSED LIGHT FIXTURE IN CEILING GRID  
A3.01 / SCALE: 1 1/2" = 1'-0"



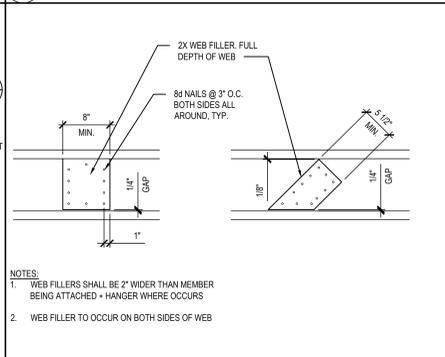
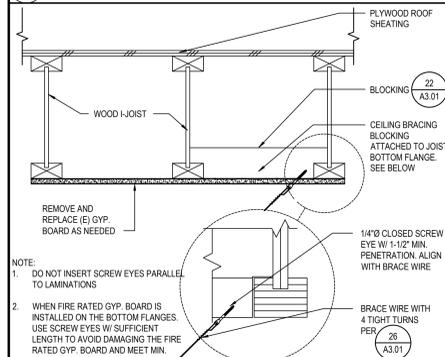
29 NOT USED  
A3.01 / SCALE: 1/4" = 1'-0"

24 BASE PLATE @ SUPPORT  
A3.01 / SCALE: 3" = 1'-0"



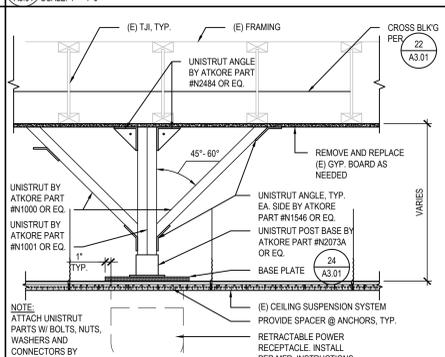
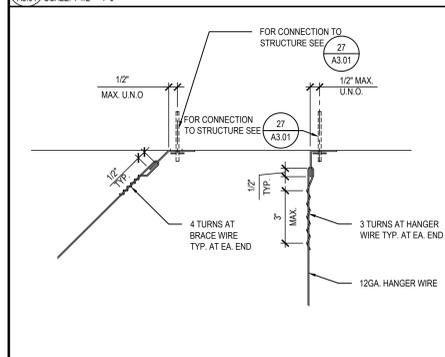
28 NOT USED  
A3.01 / SCALE: 1/4" = 1'-0"

23 BLOCKING @ (E) I-JOIST  
A3.01 / SCALE: 3" = 1'-0"



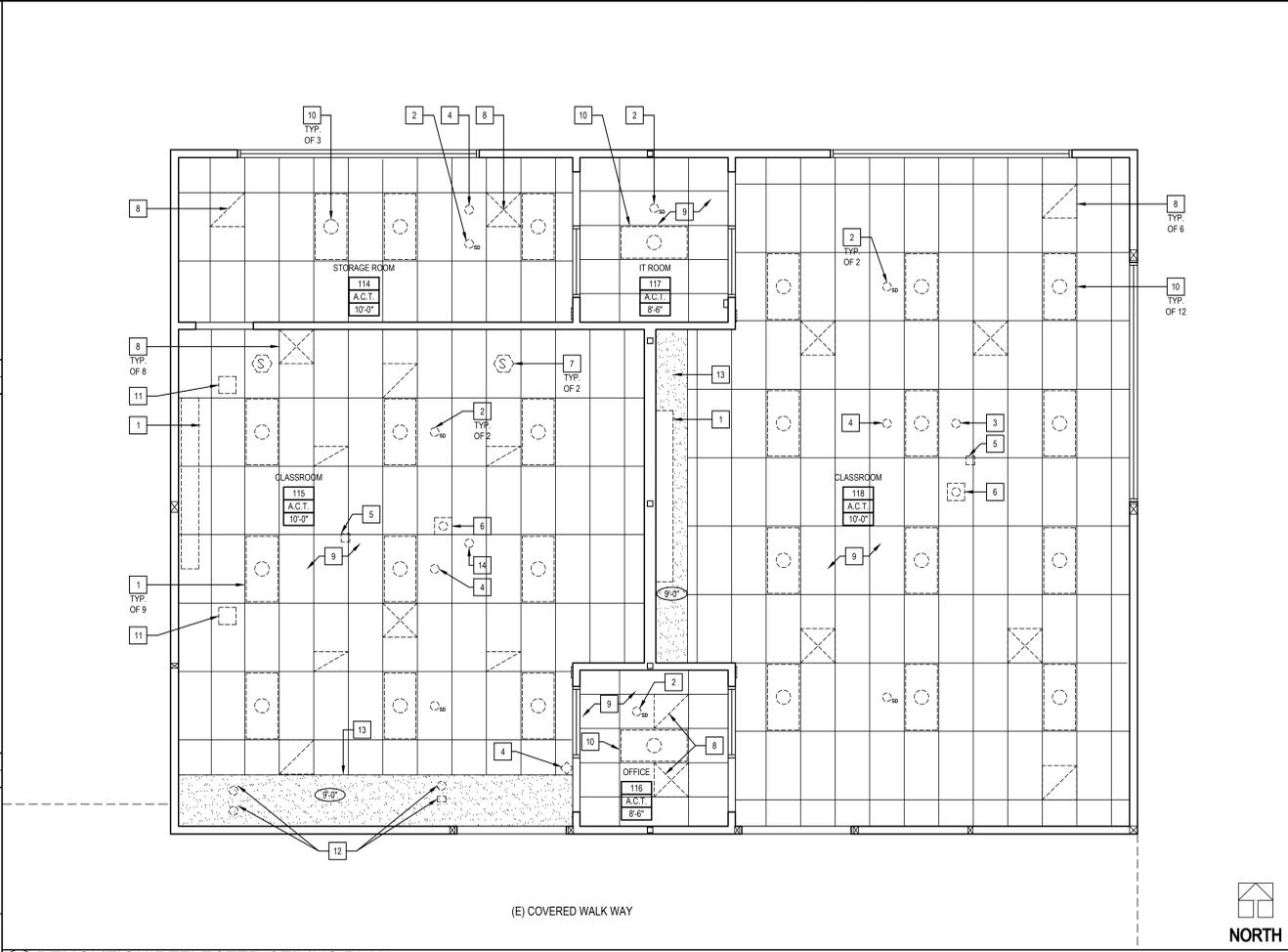
27 BRACE WIRE CONNECTION TO WOOD I-JOIST  
A3.01 / SCALE: 1 1/2" = 1'-0"

22 WEB FILLER/TJI CONNECTION  
A3.01 / SCALE: 1" = 1'-0"

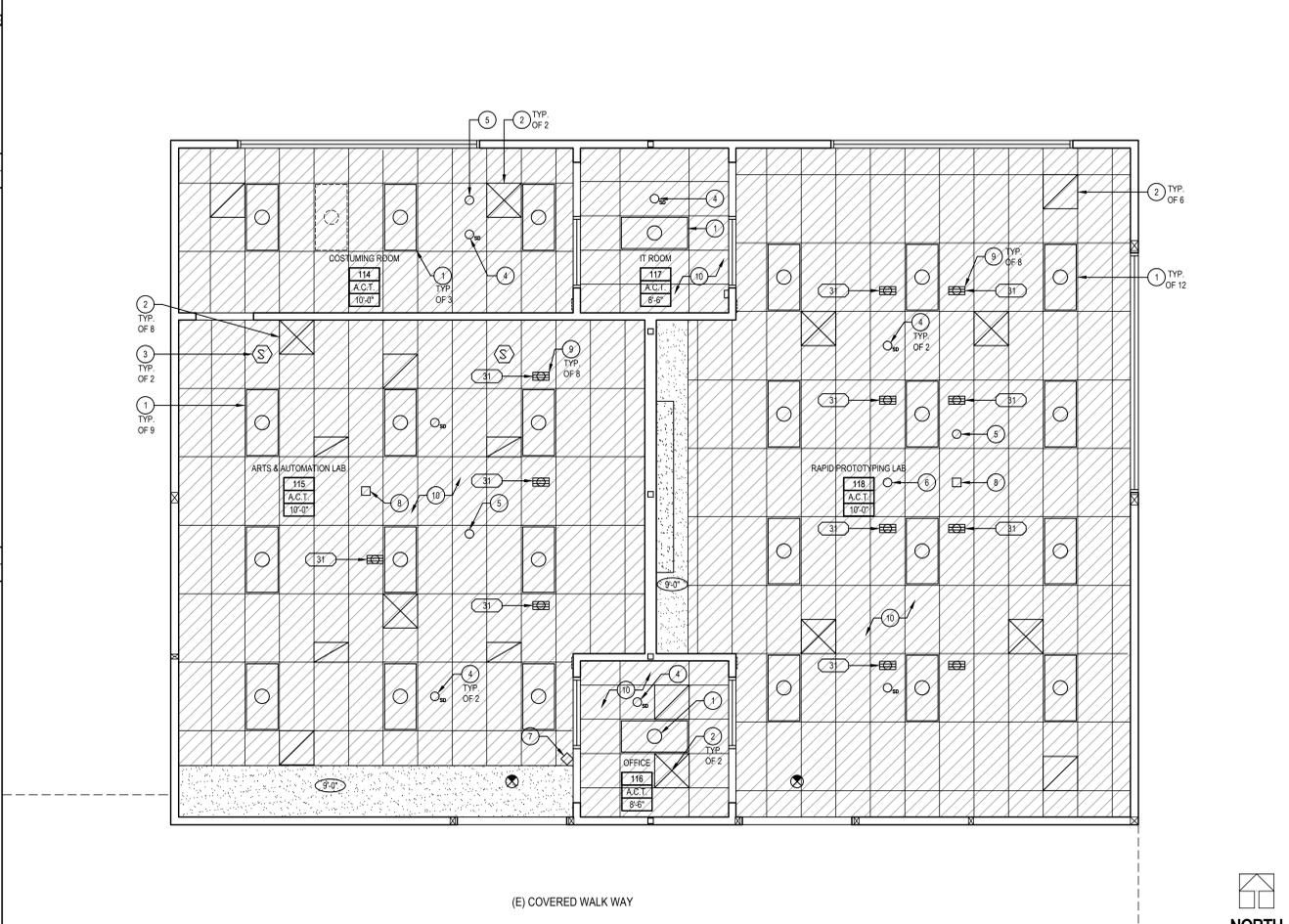


26 TYP. BRACE AND HANGER WIRE CONNECTION  
A3.01 / SCALE: 3" = 1'-0"

21 CEILING MOUNTED RETRACTABLE POWER RECEPT.  
A3.01 / SCALE: 1" = 1'-0"



18 DEMOLITION REFLECTED CEILING PLAN  
A3.01 / SCALE: 1/4" = 1'-0"

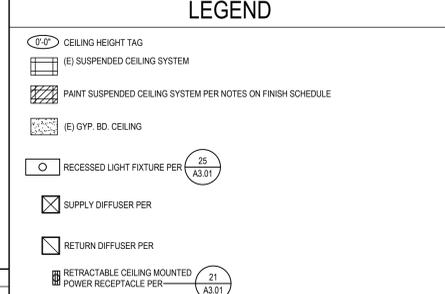


16 REMODEL REFLECTED CEILING PLAN  
A3.01 / SCALE: 1/4" = 1'-0"

- ### DEMOLITION RCP KEYNOTES
- REMOVE (E) RECESSED PROJECTION SCREEN, FRAMING AND TRIM. PATCH & REPAIR DAMAGED AREAS. MATCH ADJACENT FINISHES AND TEXTURE.
  - REMOVE (E) SMOKE DETECTOR. SAVE FOR REINSTALLATION.
  - REMOVE (E) OCCUPANCY SENSOR. SAVE FOR REINSTALLATION.
  - REMOVE (E) CEILING MOUNTED FIRE STROBE. SAVE FOR REINSTALLATION.
  - REMOVE (E) CEILING MOUNTED WIRELESS ACCESS POINT. SAVE FOR REINSTALLATION.
  - REMOVE (E) PROJECTOR MOUNT AND ASSOCIATED WIRING. RETURN TO OWNER.
  - REMOVE (E) SPEAKER. SAVE FOR REINSTALLATION.
  - REMOVE (E) MECHANICAL REGISTER. CLEAN AND SAVE FOR REINSTALLATION.
  - REMOVE (E) CEILING TILE. (E) CEILING TILE FRAME TO REMAIN. REPAIR ANY DAMAGED CEILING GRID SYSTEMS.
  - REMOVE (E) LIGHT FIXTURE.
  - REMOVE (E) VIDEO MONITOR MOUNT AND ASSOCIATED WIRING.
  - REMOVE (E) MISCELLANEOUS CEILING ITEMS AND ASSOCIATED WIRING. COORDINATE WITH OWNER. PATCH & REPAIR DAMAGED AREAS. FINISH TO MATCH ADJACENT TEXTURE AND PAINT.
  - (E) GYPSUM BOARD CEILING TO REMAIN. PROTECT IN PLACE. PATCH & REPAIR ANY DAMAGED AREAS EFFECTED BY DEMOLITION WORK.
  - REMOVE (E) CEILING MOUNTED CAMERA.

- ### RCP GENERAL NOTES
- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
- REFLECTED CEILING PLAN NOTES:**
- CEILING HEIGHTS ARE AS NOTED ON THE REFLECTED CEILING PLAN UNLESS NOTED OTHERWISE.
  - ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, ETC. ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
  - IN ACoustICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ASP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH ARCHITECT.
  - PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, ETC. AT ACoustICAL PANEL CEILING.
  - MAIN RUNNER SPLICES: USE USG SPLICE CLIP DSGC-180.
  - REPLACE / PROVIDE ACoustICAL TILES PER NOTES ON FINISH SCHEDULE.
  - AFTER ACoustICAL TILE REPLACEMENT PAINT ALL SUSPENDED CEILING PER NOTES ON FINISH SCHEDULE.

- ### RCP KEYNOTES
- LIGHT FIXTURE
  - RELOCATED MECHANICAL DIFFUSER
  - RELOCATED SPEAKER
  - RELOCATED SMOKE DETECTOR
  - RELOCATED CEILING MOUNTED FIRE STROBE
  - RELOCATED CEILING MOUNTED OCCUPANCY SENSOR
  - RELOCATED CEILING MOUNTED MOTION SENSOR
  - RELOCATED CEILING MOUNTED WIRELESS ACCESS POINT
  - RETRACTABLE CEILING MOUNTED POWER RECEPTACLE. REFER TO PAGE A2.02
  - ACOUSTIC CEILING TILES ON (E) CEILING GRID



CONSULTANT:  
 DEMOLITION / REMODEL REFLECTED CEILING PLANS, DETAILS  
 MAKERSPACE CONVERSION - SAN JACINTO CAMPUS  
 MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
 BUILDING 100, ROOMS 110 & 111  
 1499 N. STATE STREET, SAN JACINTO, CA 92583

SEALS:  
 REGISTERED ARCHITECT  
 STATE OF CALIFORNIA  
 215410-00  
 PROJECT NUMBER  
 9/16/2021  
 PROJECT STATUS  
 9/16/2021  
 PROJECT ISSUED  
 REVISION: DATE DESCRIPTION

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# A3.01



**GENERAL NOTES**

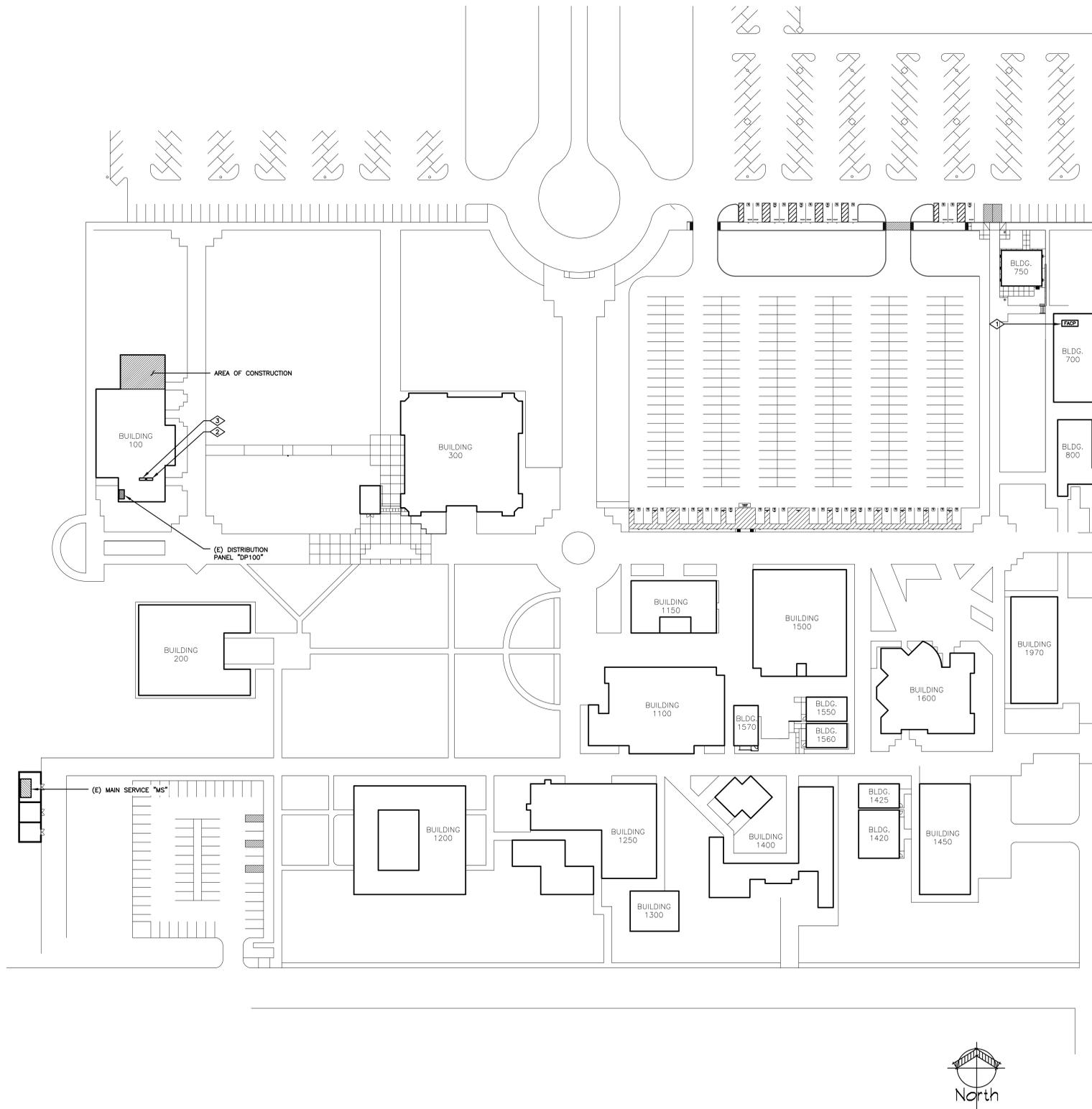
- CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, SERVICE REQUIREMENTS AND EXACT LOCATIONS OF SERVICE FACILITIES BEFORE SUBMITTING BID. SUBMITTAL OF BID INDICATES CONTRACTOR ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.
- CONSTRUCTION TERMINOLOGY AND THE STANDARDS OF INSTALLATION REQUIRED BY THESE CONTRACTOR DOCUMENTS ARE BASED ON PUBLISHED STANDARDS OF N.E.C.A. (NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION), NATIONAL ELECTRICAL SAFETY CODE, AMERICAN NATIONAL STANDARDS INSTITUTE DOCUMENTS, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, UNDERWRITERS LABORATORIES, AND THE CALIFORNIA ELECTRICAL CODE. SUBMITTAL OF BID INDICATES THE CONTRACTOR IS FAMILIAR OF THESE STANDARDS AND THE REQUIREMENTS NECESSARY TO PERFORM ALL THE WORK AS SET FORTH IN THESE CONTRACT DOCUMENTS AND ACCEPTS THE CONDITIONS.
- SHOP DRAWINGS SHALL BE SUBMITTED WITHIN THIRTY DAYS AFTER AWARD OF THE CONTRACT. THE CONTRACTOR SHALL SUBMIT EIGHT COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT INCLUDING MANUFACTURER AND MODEL NUMBER PROPOSED FOR THE JOB. SHOP DRAWINGS SHALL INCLUDE JOB DESCRIPTION, ARCHITECT AND ENGINEER IDENTIFICATION, AND ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS, MANUFACTURER'S BROCHURES, AND SUPPORT DATA.
- SUBMIT SHOP DRAWINGS FOR ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT, WHICH INCLUDES, BUT NOT LIMITED TO: PANEL BOARDS, LIGHTING FIXTURES, AND ELECTRICAL PRODUCTS.
- THESE PLANS ARE DIAGRAMMATIC ONLY. FOLLOW AS CLOSELY AS POSSIBLE. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS, STRUCTURAL DETAILS, EXACT EQUIPMENT AND OUTLET LOCATIONS.
- ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER TRADES.
- DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL DEVICES OR EQUIPMENT.
- CONTRACTOR SHALL PROVIDE ALL J-BOXES, PULL BOXES, ELLS, OFFSETS ETC., FOR A COMPLETE, CODE APPROVED, INSTALLATION OF ALL CONDUIT. FOOTAGE SHOWN ON ELECTRICAL SINGLE LINES AND Riser DIAGRAMS ARE FOR CALCULATION PURPOSES ONLY, AND ARE NOT FOR BIDDING PURPOSES OR MATERIAL TAKEOFF. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND TO COORDINATE WITH MECHANICAL, FIRE PROTECTION, AND PLUMBING DRAWINGS FOR DUCTS, LINES, AND EQUIPMENT.
- ALL MATERIALS SHALL BE NEW, AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY THE UNDERWRITER'S LABORATORIES FOR THE USE AND ENVIRONMENT, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY, AND ALL GOVERNING BODIES HAVING JURISDICTION. MANUFACTURERS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY A.N.S.I., U.L., N.E.M.A., AND N.B.F.U. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES, O.S.H.A., THE PRESENTLY ADOPTED NATIONAL ELECTRICAL CODE, AND PRESENTLY ADOPTED CALIFORNIA ELECTRICAL CODE (C.E.C.).
- COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. SUPPLY POWER AND MAKE CONNECTIONS TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS SHALL BE PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGH-IN IN ALL CONDUIT TO THIS EQUIPMENT.
- EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENING IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAW CUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE RATING OF THE PARTICULAR WALL, FLOOR, OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE U.L. APPROVED.
- ALL CONDUIT SHALL BE INSTALLED CONCEALED WHERE PHYSICALLY POSSIBLE.
- CONCEALED CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (E.M.T.) WITH COMPRESSION TYPE COUPLERS. SECURED WITH ONE-HOLE PIPE STRAPS.
- ALL CONDUIT ONLY (C.O.) SHALL HAVE A 3/16" PULL WIRE OR ROPE, MINIMUM.
- CONDUIT SHOWN AS EXPOSED OR APPROVED FOR EXTERIOR EXPOSED INSTALLATION SHALL BE INTERMEDIATE METALLIC CONDUIT (I.M.C.), SECURED WITH TWO-HOLE MALLEABLE PIPE STRAPS AND SCREWS. ALL BOXES AND FITTINGS SHALL BE SUPPORTED AND SECURED IN COMPLIANCE WITH C.E.C. ARTICLE 370.
- CONDUIT SHOWN AS EXPOSED OR APPROVED FOR INTERIOR EXPOSED INSTALLATION, IN PUBLIC AREAS, SHALL BE WIREMOLD INSTALLED IN PARALLEL OR IN RIGHT ANGLES WITH ALL REQUIRED MOUNTING ACCESSORIES.
- PENETRATIONS TO FIRE-RATED MATERIALS SHALL BE RESTORED TO EQUAL RATING AS REQUIRED BY THE STATE FIRE MARSHAL AND ALL OTHER GOVERNING BODIES.
- ALL CONDUCTORS OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN COMPLIANCE WITH O.S.H.A.
- THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE PRESENTLY ADOPTED EDITION OF THE C.E.C., ARTICLE #250.
- CONDUCTORS SHALL BE CODE GRADE, 600 VOLT CLASS, COPPER, MARKED 24" ALONG ITS LENGTH SHOWING MANUFACTURER'S NAME, MAXIMUM ALLOWABLE VOLTAGE AND SIZE. CONDUCTORS SHALL BE TYPE "THWN" (WET) OR "THHN" (DRY). DELIVER CONDUCTORS TO THE JOB SITE IN UNBROKEN PACKAGES.
- THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED.
- REVIEW ARCHITECTURAL ELEVATIONS OF CASEWORK. OUTLETS MOUNTED ABOVE, BELOW, OR ADJACENT TO CASEWORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS PRIOR TO FINAL ROUGH-IN. ELECTRICAL DRAWINGS SHALL GOVERN NUMBER AND TYPE OF OUTLETS. PROVIDE CONDUIT, WIRES, AND OUTLETS FOR WORK REQUIRED IN CASEWORK INSTALLATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT-OUTS IN TILE WHERE ELECTRICAL DEVICES OCCUR. PROVIDE BOX EXTENSIONS THROUGH ALL CASEWORK. FINISH FLUSH WITH FACE OF CABINET, ETC.
- ARCHITECTURAL REFLECTED CEILING PLANS INDICATING THE LOCATION OF LIGHTING FIXTURES SHALL TAKE PRECEDENCE OVER THE LOCATIONS OF SAME AS SHOWN ON THE ELECTRICAL DRAWINGS. INSTALL THE LIGHTING FIXTURES IN ANY GIVEN AREA TO AGREE WITH THE REFLECTED CEILING PLANS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. WHERE FIXTURES ARE RECESSED IN PLASTER OR DRYWALL CEILINGS, THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMES.
- PROVIDE ALL HANGERS, CLIPS, SEISMIC SUPPORTS, LENSES, ETC. PER ALL REQUIRED CODES FOR A COMPLETE LIGHTING FIXTURE.
- ALL RECESSED LIGHTING FIXTURES, SPEAKERS, RECEPTACLES, SWITCHES, ETC., MOUNTED IN FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL.
- ALL LOW VOLTAGE ELECTRONIC SYSTEMS CONDUCTORS AND EQUIPMENT SHALL BE INSTALLED BY AN ELECTRONIC SYSTEMS CONTRACTOR WHO HOLDS A VALID C-10 LICENSE (FIRE ALARM) & C-7 LICENSE (COMMUNICATION, DATA, VIDEO, AND INTRUSION). EQUIPMENT SHALL MATCH EXISTING AND SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED BY THE FACTORY AUTHORIZED DISTRIBUTOR OF THE EXISTING SYSTEM. NEW COMPONENTS INSTALLED SHALL BE COVERED BY FULL WRITTEN WARRANTY, FOR ALL PARTS AND INSTALLATION ON THE ENTIRE SYSTEM. CABLE SPLICES IN UNDERGROUND PULL BOXES ARE ABSOLUTELY PROHIBITED FOR SYSTEMS NOTED: FIRE ALARM, COMMUNICATION, AND INTRUSION ALARM AS SHOWN ON PLANS.
- PROVIDE THE OWNER WITH ONE (1) SET OF COMPLETE, UP TO DATE, "AS-BUILT" REPRODUCIBLE DRAWINGS AT THE COMPLETION OF THE PROJECT, SHOWING ACTUAL DEPTHS OF UNDERGROUND CONDUIT RUNS AT ALL LOCATIONS. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE OWNER AT PROJECT COMPLETION.
- THE COMPLETE PROJECT SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR, AFTER DATE OF ACCEPTANCE, BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED IN A TIMELY MANNER, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
- WHERE A CONFLICT OCCURS BETWEEN THESE NOTES OR THE ELECTRICAL DRAWINGS ISSUED AS A PART OF THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL PREVAIL.
- PANEL BOARDS SHALL BE COPPER "BOLT-ON" TYPE. COMPONENTS AND FEATURES SHALL BE IN STRICT ACCORDANCE WITH THE SERVING UTILITIES CODE ENFORCING AGENCY, ELECTRICAL DRAWINGS, AND MAIN SERVICE MANUFACTURER AND OPERATING CHARACTERISTICS.
- PROVIDE ENGRAVED PLASTIC NAMEPLATES FOR ALL SWITCHBOARDS, PANEL BOARDS, LOAD CENTERS, TRANSFORMERS, AND TERMINAL CABINETS. PLATES SHALL BE 3 PLY, BLACK FACE, WHITE CORE, WITH 1/4" HIGH GOTHIC LETTERING.
- HAND THE OWNER ONE SPARE SET OF EACH SIZE AND TYPE OF FUSE INSTALLED ON THIS PROJECT.

**FIRE ALARM NOTES:**

- ◇ EXISTING FIRE ALARM CONTROL PANEL, "FACP".
- ◇ EXISTING FIRE ALARM A.D.A. BOOSTER PANEL.
- ◇ EXISTING FIRE ALARM INX CABINET

**ELECTRICAL SYMBOLS LIST**

- RECESS MOUNTED CEILING LIGHT FIXTURE - REFER TO FIXTURE SCHEDULE.
- SHADED AREA INDICATES THAT THE LIGHT FIXTURE IS ON AN EMERGENCY SYSTEM
- ⊙ L.E.D. EXIT SIGN WALL MOUNTED - REFER TO LIGHTING FIXTURE SCHEDULE SHADED SIDE INDICATED FACE DIRECTION
- ⊕ DUPLEX RECEPTACLE, WALL MOUNTED +15" A.F.F. TO BOTTOM OF OUTLET BOX OR AS NOTED.
- ⊕ QUADPLEX RECEPTACLE, WALL MOUNTED +15" A.F.F. TO BOTTOM OF OUTLET BOX OR AS NOTED.
- ⊕ SPECIAL RECEPTACLE, SIZE AND NEMA CONFIGURATION AS INDICATED ON DRAWING
- ⊕ DUPLEX RECEPTACLE IN FLOOR BOX WITH SPRING LOADED POP UP DOORS
- ⊕ DROP REEL POWER CORD SURFACE MOUNT TO ROOF DECK
- ⊕ JUNCTION BOX, ACCESSIBLE AND MOUNTED FOR THE APPLICATION DENOTED ON PLANS.
- ⊕ JUNCTION BOX, WALL MOUNTED. FIELD VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN.
- ⊕ FLUSH MOUNTED ELECTRICAL PANELBOARD, REFER TO PANEL SCHEDULE.
- ⊕ DISTRIBUTION SWITCHBOARD REFER TO SINGLE LINE DIAGRAM.
- ⊕ FUSED DISCONNECT SWITCH - HP RATED WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED.
- ⊕ NON-FUSED DISCONNECT SWITCH-HP RATED AND WEATHERPROOF AS REQUIRED.
- ⊕ GROUND CONNECTION, SIZE AS INDICATED OR AS REQUIRED.
- ⊕ SINGLE POLE WALL SLIDE DIMMER W/ ON/OFF SWITCH MOUNTED +48" A.F.F. TO TOP OF SWITCH OF CONTROL BOX
- ⊕ ROOM LIGHTING OCCUPANCY SENSOR UNIT MOUNTED TO CEILING
- ⊕ HOME RUN TO PANEL LETTER DESIGNATES PANEL, NUMBER INDICATES CIRCUITS.
- CONDUIT RUN CONCEALED, IN WALLS, FLOOR, OR ABOVE CEILING.
- CONDUIT RUN EXPOSED TO WALL OR CEILING
- UNDERGROUND CONDUIT 3/4" MINIMUM
- BRANCH CIRCUIT WIRING, 2 #12 IN 3/4" CONDUIT OR AS NOTED OR SYMBOLIZED
  - 3/4" C-3 #12
  - 3/4" C-4 #12
  - 3/4" C-5 #12
  - 3/4" C-6 #12
  - 3/4" C-7 #12
  - 3/4" C-8 #12
- CONDUIT STUB OUT, CAP & MARK.
- EXISTING CONDUIT TO REMAIN
- ⊕ PULLBOX, SIZED PER N.E.C. OR AS NOTED.
- ⊕ DATA OUTLET BOX +15" TO BOTTOM OR AS NOTED W/ CAT 6 DATA CABLES AS SHOWN
- ⊕ DATA OUTLET BOX MOUNTED FLUSH IN CEILING W/ CAT 6A DATA CABLES AS SHOWN
- ⊕ DATA OUTLET BOX MOUNTED FLUSH IN FLOOR W/ POP UP LID AND CAT 6 DATA CABLES AS SHOWN
- ⊕ DIGITAL CAMERA (AVIGILON) SURFACE TO CEILING W/ CAT-6 CAMERA CABLE AS SHOWN.
- ⊕ INTRUSION ALARM MOTION SENSOR WALL MOUNTED AT CEILING LINE
- ⊕ INTRUSION ALARM MOTION SENSOR CEILING MOUNTED
- ⊕ ELECTRIC DOOR LOCK SYSTEM READER (ALLEGION-SCHLAGE) MOUNTED +42" A.F.F. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN
- ⊕ ELECTRIC DOOR LOCK CONTROL PANEL (ALLEGION)
- ONE CAT 6 CAMERA SYSTEM CABLE.
- 2C TWO CAT 6 CAMERA SYSTEM CABLE.
- 3C THREE CAT 6 CAMERA SYSTEM CABLE.
- ONE CAT 6 DATA SYSTEM CABLE.
- 2D TWO CAT 6 DATA SYSTEM CABLE.
- 4D FOUR CAT 6 DATA SYSTEM CABLE.
- 6D SIX CAT 6 DATA SYSTEM CABLE.
- 3/4" C, W/ REQUIRED INTRUSION ALARM CONDUCTORS
- ⊕ EXISTING ADDRESSABLE VOICE EVACUATION FIRE ALARM CONTROL PANEL
- ⊕ EXISTING FIRE ALARM SPEAKER/FLASHING LIGHT MTD TO CEILING NUMBER INDICATES CANDELA RATING
- ⊕ EXISTING FIRE ALARM FLASHING LIGHT MTD TO CEILING NUMBER INDICATES CANDELA RATING
- ⊕ EXISTING FIRE ALARM WEATHERPROOF SPEAKER MTD. +80" OR AS NOTED.
- ⊕ EXISTING ADDRESSABLE FIRE ALARM SMOKE DETECTOR, SURFACE MOUNTED TO CEILING
- ⊕ EXISTING ADDRESSABLE FIRE ALARM HEAT DETECTOR, SURFACE MOUNTED IN ATTIC
- ⊕ LIGHT FIXTURE CALL OUT, "1A" INDICATES FIXTURE TYPE (REFER TO FIXTURE SCHEDULE). "100" INDICATES TOTAL FIXTURE WATTAGE, NUMBER ADJACENT INDICATES QUANTITIES. (NUMBER IS SHOWN FOR BRANCH CIRCUIT PURPOSE ONLY, NOT FOR MATERIAL TAKE-OFF).
- ⊕ DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.
- ② PLAN NOTE REFERENCE.
- △ REVISION REFERENCE.
- CO CONDUIT ONLY, WITH PULL ROPE.
- MH MOUNTING HEIGHT
- WP WEATHERPROOF, NEMA 3R
- PROVIDE FURNISH, INSTALLED AND CONNECTED, COMPLETE.
- GFCI GROUND FAULT CIRCUIT INTERRUPTER
- EM EMERGENCY
- C CONDUIT
- ODA OWNER FURNISHED, CONTRACTOR INSTALLED.
- ADA AMERICANS WITH DISABILITY ACT
- E/G EQUIPMENT GROUND (GREEN)
- ICD COMMUNICATIONS WALL DISPLAY
- (E) EXISTING TO REMAIN



SCALE 1  
1"=60'-0"

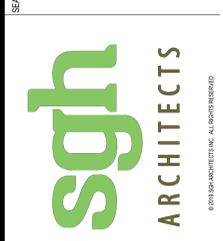
**ELECTRICAL SITE PLAN**

Job # 2763  
P.M. James Coors  
Engineering Inc.  
Electrical Engineering & Construction  
8144 E Palm Ave  
Highland, CA 92346  
909 864-8844  
909 864-0280  
james.coors@jcceng.com  
james.coors

CONSULTANT:



**SYMBOL LIST, GENERAL NOTES AND ELECTRICAL SITE PLAN**  
MAKERSPACE CONVERSION - SAN JACINTO CAMPUS  
MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
BUILDING 100: ROOM 110 & 111  
14999 N. STATE STREET, SAN JACINTO, CALIFORNIA 92583

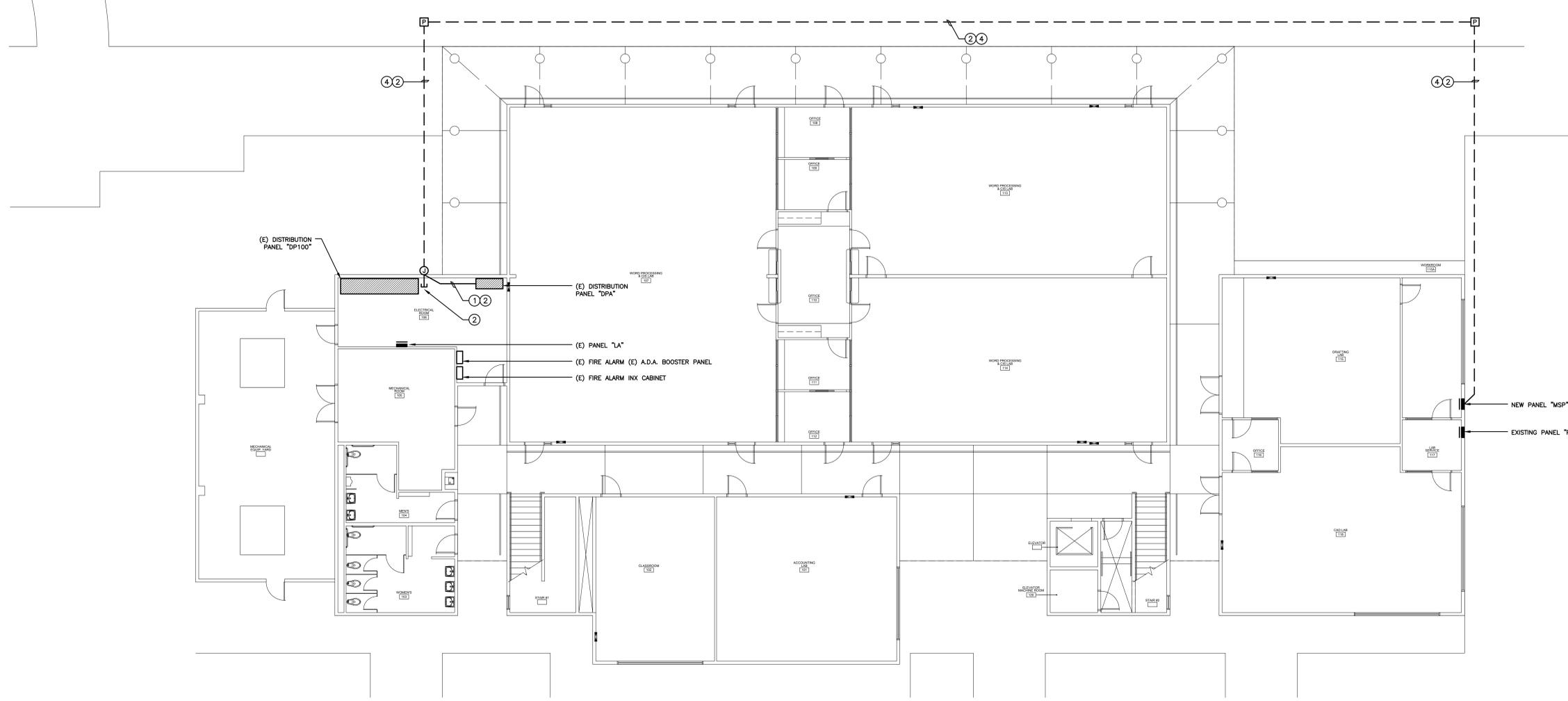


PROJECT NUMBER: 21-54101-00  
PROJECT STATUS: CD  
PROJECT ISSUED: 01/19/2021  
REVISION: DATE: DESCRIPTION

**E-1.0**

**PLAN NOTES:**

- ① MOUNT EXPOSED TO WALL OR CEILING.
- ② SEE SINGLE LINE DIAGRAM.
- ③ CORE WALL AT INTERIOR CEILING LINE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- ④ VERIFY EXACT ROUTING PRIOR TO ROUGH-IN

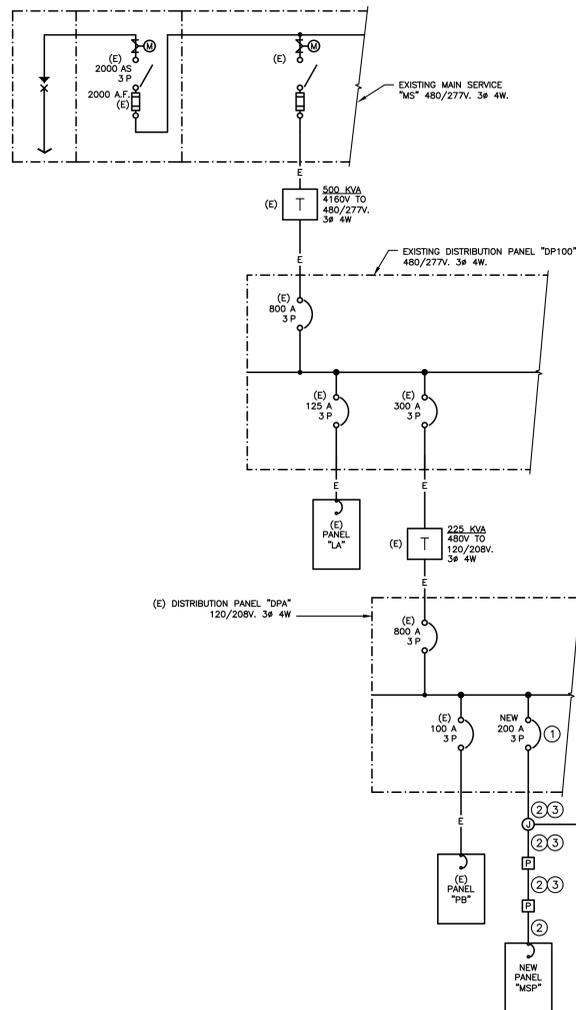


Job # 2763  
 P.M. James Corrs  
 Engineering Inc.  
 Electrical Engineering & Consulting  
 8440 John Ave  
 Highland, Ca  
 900 864-0296  
 909 864-0280  
 james.corrs@jcceng.com  
 james.com@jcceng.com

**ELECTRICAL BUILDING PLAN**  
**MAKERSPACE CONVERSION - SAN JACINTO CAMPUS**  
 MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
 BUILDING 100: ROOM 110 & 111  
 1499 N. STATE STREET, SAN JACINTO, CALIFORNIA 92583



PROJECT NUMBER: 21-54101-00  
 PROJECT STATUS: CD  
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**SINGLE LINE DIAGRAM NOTES:**

- 1 PROVIDE NEW CIRCUIT BREAKER AS SHOWN. MATCH EXISTING MANUFACTURER AND CHARACTERISTICS.
- 2 3"C., 4 #4/0 AND 1 #4 E/G
- 3 1"C.O.
- 4 1"C.O. STUB OUT IN EXISTING ELECTRICAL ROOM. SEE E-1.1

**LOAD SUMMARY:**

EXISTING CONNECTED LOAD	=	169.4	KVA
NEW ADDED LOAD	=	50.5	KVA
NEW TOTAL LOAD	=	219.9	KVA
	=	611.3	AMPS
	●	120/208V 3ø 4W.	

**SINGLE LINE DIAGRAM**

SCALE  
N.T.S.

3

**ELECTRICAL DEMOLITION PLAN**

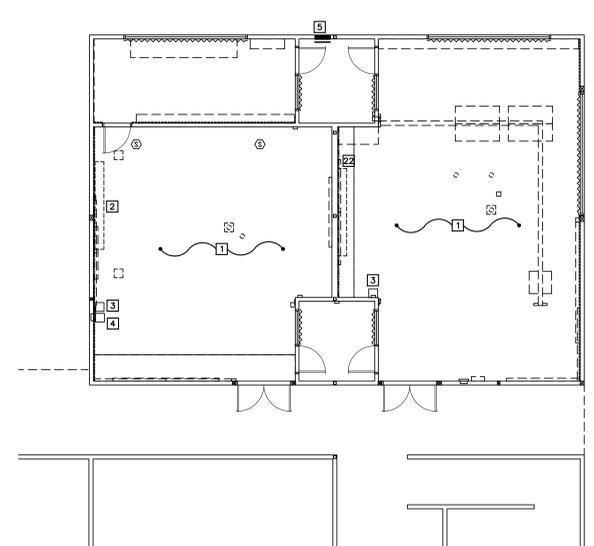
**NOTE:**  
ALL DEVICES AND EQUIPMENT SHOWN ON THIS PLAN SHALL BE COMPLETELY REMOVED.

**DEMOLITION NOTES:**

- 1 REMOVE ALL EXISTING LOW VOLTAGE DEVICES, SURFACE RACEWAYS, MOUNTS AND RACKS FROM THIS ROOM EXCEPT FIRE ALARM AND INTRUSION ALARM SYSTEMS SHALL REMAIN. EXISTING FIRE ALARM AND EXISTING INTRUSION ALARM SHALL REMAIN AS-IS AND SHALL BE COMPLETELY ACTIVE AT COMPLETION OF PROJECT
- 2 REMOVE MOTORIZED SCREEN CONNECTION
- 3 REMOVE MOTORIZED SCREEN CONTROL
- 4 REMOVE ASSISTIVE LISTENING SYSTEM CONTROL, SPEAKERS, RECEIVER, RACEWAYS AND CONDUCTORS
- 5 EXISTING PANEL "PB" TO REMAIN

**DEMOLITION NOTES**

1. IN GENERAL, ELECTRICAL EQUIPMENT WHETHER SHOWN ON THIS DRAWING OR NOT, THAT IS LOCATED IN REMOVED WALLS, FLOORS OR CEILINGS SHALL BE REMOVED UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL VISIT THE SITE. HE/SHE SHALL THOROUGHLY INVESTIGATE THESE EXISTING CONDITIONS AND, BY SUBMITTING A BID, ACCEPTS CONDITIONS UNDER WHICH HE/SHE WILL BE REQUIRED TO PERFORM THE FULL SCOPE OF WORK.
3. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES, RECEPTACLES, ELECTRICAL EQUIPMENT, ETC., AFFECTED BY THE REMODELED AREA. THIS WILL INCLUDE RE-ROUTING OR EXTENDING OF EXISTING CONDUIT AND FEEDERS WHERE NECESSARY TO MAINTAIN THE CONTINUITY OF THE EXISTING EQUIPMENT OR DEVICES THAT ARE TO REMAIN.
4. ALL CIRCUIT NUMBERS AND EXISTING CONDUIT RUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING PANEL SCHEDULES AND "AS BUILT" RECORDS. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS IF REQUIRED.
5. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS, EQUIPMENT, ETC., REMAINING IN OPERATION WHICH ARE BEING FED BY AN ABANDONED OUTLET. MAINTAINING CONTINUITY SHALL CONSIST OF RE-ROUTING OF CONDUIT, WIRE, ETC., AS REQUIRED.
6. EXISTING CONDUIT FEEDS UP THROUGH FLOOR SHALL BE CUT OFF AND PLUGGED FLUSH WITH FLOOR WHERE EXISTING WALLS, ETC., ARE REMOVED. REMOVE CONDUCTORS FROM THIS POINT BACK TO LAST OUTLET REMAINING IN SERVICE.
7. IN WALLS TO BE REMOVED THE EXISTING POWER CONDUIT AND CONDUCTORS SHALL BE REMOVED BACK TO LAST OUTLET REMAINING IN SERVICE.
8. IN WALLS TO BE REMOVED THE EXISTING CONDUIT AND LOW VOLTAGE CABLES SHALL BE REMOVED BACK TO EXISTING RACK.
9. ALL EXISTING UN-USED LOW VOLTAGE CONDUCTORS/CABLES SHALL BE REMOVE BACK TO EXISTING PANEL OR RACK.
10. CONTRACTOR SHALL COMPLETELY REMOVE EXISTING PATCH CORDS AT RACK FOR ALL UNUSED OUTLETS. PATCH CORDS SHALL BE TURNED OVER TO OWNER.
11. EXISTING CONDUIT MAY BE RE-USED IF ADEQUATELY SIZED PER C.E.C., BUT IN NO CASE SHALL ANY EXISTING CONDUCTORS THAT HAVE BEEN REMOVED, BE RE-USED.
12. CONTRACTOR SHALL PATCH ALL WALLS AND CEILINGS WHERE ELECTRICAL DEVICES ARE REMOVED.
13. EXISTING JUNCTION BOXES TO REMAIN SHALL HAVE BLANK STEEL COVER PLATE PROVIDED.
14. ALL EXPOSED INTERIOR AND EXTERIOR CONDUCTORS AND DATA CABLES SHALL BE COMPLETELY REMOVED
15. ALL EXISTING LIGHT FIXTURES, SWITCHES AND RECEPTACLES TO REMAIN THAT ARE DAMAGED, DISCOLORED OR FAULTY SHALL BE REPLACED PRIOR TO BID.
16. ALL EXISTING RECEPTACLES TO REMAIN SHALL BE CLEANED.
17. ALL EXISTING SURFACE WIREMOLD SHALL BE COMPLETELY REMOVED
18. ALL EXISTING EXPOSED DATA RACKING SYSTEMS SHALL BE REMOVED
19. EXISTING ASSISTIVE LISTENING SYSTEM, CONTROLS AND SPEAKERS SHALL BE COMPLETELY REMOVED.
20. IN EXISTING PANELS CONTRACTOR SHALL IDENTIFY AND TURN OFF EXISTING UNUSED CIRCUIT BREAKER. LABEL UNUSED CIRCUIT BREAKERS AS "SPARE".



**LIGHTING FIXTURE SCHEDULE**

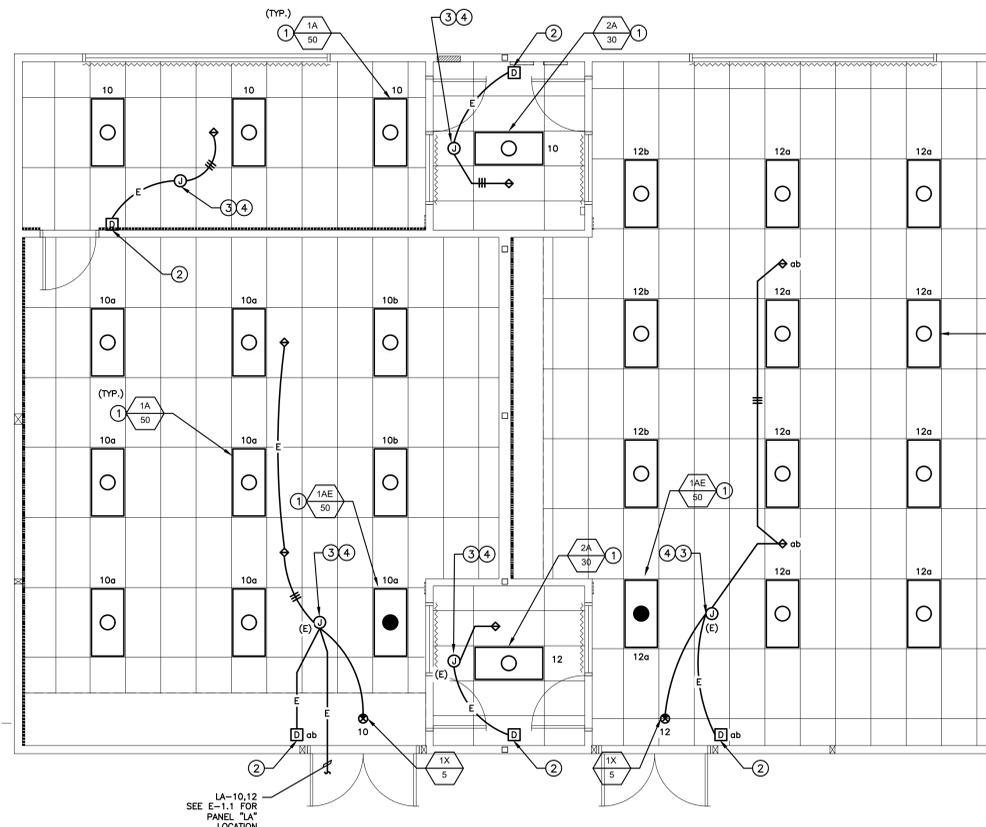
REFER TO DIVISION 1, GENERAL REQUIREMENTS, REGARDING PRODUCT OPTIONS AND SUBSTITUTION. WHERE THREE OR MORE MANUFACTURERS ARE LISTED IN THE FOLLOWING LIGHTING FIXTURE SCHEDULE, SUBSTITUTION WILL NOT BE CONSIDERED. WHERE PRODUCTS ARE LISTED BY NAMING ONE OR MORE MANUFACTURERS, WITHOUT "OR EQUAL" PROVISION FOR SUBSTITUTION, CONTRACTOR SHALL INCLUDE ONLY SPECIFIED PRODUCTS IN BID. REQUEST FOR SUBSTITUTION WITHIN 35 DAYS FROM THE DATE OF THE NOTICE TO PROCEED WILL ONLY BE CONSIDERED IN ACCORDANCE WITH DIVISION 1 OF THESE CONTRACT DOCUMENTS.

DESCRIPTION	LAMPS		VOLTS	MOUNTING
	WATTS	TYPE		
1A 50 2'x4' L.E.D. TROFFER W/ CENTER ACRYLIC LENS & SMARTCAST WIRELESS DIMMING CREE ZR24-SOL-835-SC1-UNV-EB	50	L.E.D. 3500K	277	RECESSED IN CEILING
1AE 50 SAME AS "1A" EXCEPT [1]	50	L.E.D. 3500K	277	RECESSED IN CEILING
2A 30 CREE ZR24-SOL-835-SC1-UNV-EB SAME AS "1A" EXCEPT LUMEN OUTPUT	30	L.E.D. 3500K	277	RECESSED IN CEILING
1X 5 CREE ZR24-SOL-835-SC1-UNV SINGLE FACE WALL L.E.D. EXIT SIGN W/ RED LETTERS, BRUSHED ALUMINUM HOUSING AND 90 MINUTE BATTERY PACK BIG BEAM EDCL-2-R-A-A	COMPLETE	LED	277	CANOPY TO CEILING

NOTES:  
[1] PROVIDE 90 MINUTE EMERGENCY BATTERY PACK 1100 LUMENS MINIMUM.

**LIGHTING PLAN NOTES**

- 1 REMOVE EXISTING FIXTURE AND PROVIDE NEW AS SHOWN.
- 2 REMOVE EXISTING SWITCH(ES) AND PROVIDE NEW WIRELESS DIMMERS AS SHOWN (CREE #SSC-CO-UNV-W). PROGRAM NEW DIMMERS W/ NEW PROGRAMMABLE LIGHT FIXTURES AFTER INSTALLATION
- 3 DISCONNECT (2) EXISTING "TRAVELER" CONDUCTORS FROM REMOVED SWITCHES CONNECT (1) EXISTING TRAVELER CONDUCTOR TO EXISTING NEUTRAL CONDUCTOR IN BOX. TAPE OFF REMAINING (1) EXISTING TRAVELER CONDUCTOR IN BOX.
- 4 DISCONNECT (2) EXISTING TRAVELER CONDUCTORS TO LIGHT FIXTURES AND CONNECT BOTH TO "CONSTANT" HOT CONDUCTOR IN BOX.



LA-10,12  
SEE E-1.1.1 FOR  
PANEL "LA"  
LOCATION

**ELECTRICAL LIGHTING PLAN**

SCALE  
1/4"=1'-0"

2

Job # 2763  
P.M. James Corrs  
Engineering Inc.  
Electrical Engineering & Consulting  
8340 Palm Ave  
Highland, CA 92346  
909 864-0280  
909 864-0280  
james.corrs@jcceng.com

CONSULTANT:  
**JCC**

SINGLE LINE DIAGRAM, LTG FIXTURE SCHEDULE,  
DEMOLITION PLAN AND LIGHTING PLAN  
MAKERSPACE CONVERSION - SAN JACINTO CAMPUS

MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT  
BUILDING 100: ROOM 110 & 111  
14999 N. STATE STREET, SAN JACINTO, CALIFORNIA 92583



SCALE



PROJECT NUMBER: 21-54101-00  
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**E-2.0**

