

# **BID PACKET**

## **PROJECT# 1534 STRUCTURED CABLING UPGRADE, VISALIA CAMPUS**

**COLLEGE OF THE SEQUOIAS  
SEQUOIAS COMMUNITY COLLEGE DISTRICT**

915 South Mooney Boulevard  
Visalia, California 93277

October 10, 2019

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# PROJECT MANUAL

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## NOTICE TO BIDDERS

<b>DISTRICT</b>	Sequoias Community College District
<b>PROJECT NAME</b>	<b>Bid#1534 - Structured Cabling Upgrade, Visalia Campus</b>
<b>PROJECT DESCRIPTION</b>	The technology infrastructure within the Visalia Campus at College of the Sequoias' Data Center is nearing the end of its useful life. As a result, COS, Visalia Campus requires new data cabling to be installed in select areas of its campus.
<b>MANDATORY PRE-BID CONFERENCE/JOB WALK</b>	<b>Tuesday, October 22, 2019 at 10:00 a.m.</b>
<b>BID PROPOSALS DUE DATE / TIME</b>	<b>Thursday, November 21, 2019 @ 1:00 p.m.</b>
<b>LOCATION FOR SUBMISSION OF BID PROPOSALS</b>	College of the Sequoias Purchasing Dept. (Sequoia, Payroll 2) 915 S. Mooney Blvd. Visalia, California 93277
<b>LOCATION FOR OBTAINING BID AND CONTRACT DOCUMENTS</b>	College of the Sequoias Purchasing Dept. (Sequoia, Payroll 2) 915 S. Mooney Blvd. Visalia, California 93277 P. 559-730-3765 Email: <a href="mailto:ashleyco@cos.edu">ashleyco@cos.edu</a> Website: <a href="https://www.cos.edu/en-us/administration/admin-staff-support/purchasing-and-business-services">https://www.cos.edu/en-us/administration/admin-staff-support/purchasing-and-business-services</a>

**NOTICE IS HEREBY GIVEN** that the above-named California Community College District, acting by and through its Board of Trustees, hereinafter the "District" will receive up to, but not later than the above-stated date and time, sealed Bid Proposals for the Contract for the Work of the Project generally described as: **Bid#1534 - Structured Cabling Upgrade, Visalia Campus**. Work shall be completed within two hundred forty (240) calendar days - see Project Manual (Special Conditions, Article 8. Milestones) for Project Schedule restrictions and requirements. Estimated construction budget is **Eight Hundred Thousand Dollars (\$800,000)**.

**Submittal of Bid Proposals.** All Bid Proposals shall be submitted on forms furnished by the District. Bid Proposals must conform with, and be responsive to, the Bid and Contract Documents, copies of which may be obtained from the District as set forth above. Only Bid Proposals submitted to the District at or prior to the date and time set forth above for the public opening and reading of Bid Proposals shall be considered. Upon submittal of such Bid Proposal,

neither withdrawal nor modifications to any portion of the Bid Proposal shall be permitted, unless written request for withdrawal or modification is received by the District prior to the due date and time for submission of Bid Proposals.

**Bid and Contract Documents.** The Bid and Contract Documents are available at the location identified above beginning Thursday, October 10, 2019.

**Documents Accompanying Bid Proposal.** Each Bid Proposal shall be accompanied by: (a) the required Bid Security; (b) Subcontractors List; (c) Non-Collusion Affidavit; (d) Contractor's Certificate Regarding Workers' Compensation; (e) Prevailing Wage Compliance Certification; and (f) Verification of Contractor and Subcontractors' DIR Registration. The successful bidder shall also be required to enter into a written Agreement on a form provided by the District. All information or responses of a Bidder in its Bid Proposal and other documents accompanying the Bid Proposal shall be complete, accurate and true; incomplete, inaccurate or untrue responses or information provided therein by a Bidder shall be grounds for the District to reject such Bidder's Bid Proposal for non-responsiveness.

**Prevailing Wage Rates.** Pursuant to California Labor Code §1773, the Director of the Department of Industrial Relations of the State of California has determined the generally Prevailing Wage Rates in the locality in which the Work is to be performed. The Contractor and all Subcontractors performing any portion of the Work shall pay not less than the applicable PWRs for the classification of labor provided by their respective workers in the execution of the Work. Pursuant to California Labor Code §1771.4(a)(4), PWR monitoring and enforcement shall be by the Department of Industrial Relations.

**DIR Registration Verification.** Each Bidder submitting a proposal to complete the Work, labor, materials and/or services subject to this procurement, must be a Department of Industrial Relations (DIR) registered contractor pursuant to Labor Code §1725.5 ("DIR Registered Contractor"). A Bidder who is not a DIR Registered Contractor when submitting a proposal for the Work is deemed "not qualified" and the proposal of such a Bidder will be rejected for non-responsiveness. Pursuant to Labor Code §1725.5, all Subcontractors identified in a Bidder's Subcontractors' List shall be DIR Registered Contractors. If awarded the Contract for the Work, at all times during performance of the Work, the Bidder and all Subcontractors, of any tier, shall be DIR Registered Contractors.

**Contractor's License Classification.** In accordance with the provisions of California Public Contract Code §3300, the District requires that Bidders possess, at the time of submission of a Bid Proposal, at the time of award of a Contract for a Bid Package, and at all times during the Work, the classification(s) of a California Contractors License for each Bid Package as set forth below. Any Bidder not so duly and properly licensed shall be subject to all penalties imposed by law. No payment shall be made for work, labor, materials or services provided under the Contract for the Work until the Registrar of Contractors verifies to the District that the Bidder awarded the Contract is properly and duly licensed to perform the Work. **Prospective Bidders shall be required to have a valid Class C7 or valid C-10 Contractor's License.**

**District Standards.** In accordance with California Public Contract Code §3400, a designee of the District has made a finding that particular materials, products, things, and/or services are to be designated in the Contract Documents by specific brand or trade name for the following

purpose: in order to match other products in use on a particular public improvement either completed or in the course of completion (“District Standards”). The District Standards may be designated elsewhere in the Contract Documents.

**Bid Security.** Bids must be accompanied by a bidder’s bond or certified check for at least ten percent (10%) of the amount of the bid and payable to the District, which shall be given as a guarantee that the Bidder will enter into a contract if awarded the Work. Said bond or certified check will be declared forfeited, paid to, or retained by the District as Liquidated Damages if the Bidder refuses or neglects to enter into the Contract provided by the District.

**Pre-Bid Conference.** A mandatory job walk will be conducted on Tuesday, October 22, 2019 at the College of the Sequoias - Visalia campus. Bidders shall meet at the Facilities Office (Blue Oak building) at 10:00 a.m. Bidders shall meet at the specified location on the date and time for the pre-bid meeting/job walk. It is the Bidder’s sole responsibility to understand the Work and existing site conditions prior to submittal of any Bid Proposals.

**Waiver of Irregularities.** The Board of Trustees reserves the right to reject any or all proposals, waive any informality in the receiving of bids, and consider quality, convenience, and reasonable qualifications, as well as price, in making awards.

Refer questions regarding this bid to: Ashley Collins, Manager of Purchasing, College of the Sequoias, ashleyco@cos.edu, or (559) 730-3765.

SEQUOIAS COMMUNITY COLLEGE DISTRICT

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# INSTRUCTIONS TO BIDDERS

## BID 1534 – STRUCTURE CABLING UPGRADE, VISALIA CAMPUS

No Bid Proposals shall receive consideration by the Sequoias Community College District unless made in accordance with the following instructions:

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

**1.1. Bid Proposal Forms.** Bid proposals must be made on a form obtained from the District. 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. Signatures of all individuals must be in long-hand form. 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. Partially completed Bid Proposals or Bid Proposals submitted on other than the bid forms included herein are non-responsive and will be rejected. Bid Proposals not conforming to these Instructions to Bidders and the Notice to Bidders may be deemed non-responsive and rejected. Each bid must have the full business address of the Bidder and must be signed by the Bidder with his or her usual signature. Bids by partnership must furnish the full names of all partners and must be signed in the partnership name by a general partner with authority to bind the partnership in such matter. Bids by corporations must be signed with the legal name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation in this matter. The name of each person signing shall also be typed or printed below the signature. When requested by the District, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished. A Bidder's failure to properly sign required forms may result in rejection of the bid.

**1.2. Bid Proposal Submittal.** Bid Proposals shall be submitted at the place designated in the Notice to Bidders, in sealed envelopes bearing on the outside the Bidder's name and address, along with the Project Name 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 to Bidders.

**1.3. Date and Time of Bid Proposal Submittal.** Bid Proposals must be sealed and submitted to the College of the Sequoias, Purchasing Dept., Sequoia Payroll 2, 915 S. Mooney Blvd., Visalia, CA 93277, no later than the hour and date specified in the Notice to Bidders. The District recommends that bids be hand delivered in order to insure their timely receipt.

**1.4. Withdrawal of Bid Proposal.** Bid Proposals may be withdrawn by a Bidder prior to the time fixed for the opening of bids, but may not be withdrawn for a period of forty-

five (45) days after the opening of bids. A successful bidder shall not be relieved of the bid submitted without the District's consent or Bidder's recourse to Public Contract Code §5100 et. seq.

**2. Pre-Bid Conference.** A pre-bid conference may be held for the purpose of acquainting all prospective Bidders with the bid documents. Following this meeting, a site review will be conducted. It is **mandatory**, that all prospective Bidders attend the pre-bid conference and the site review as indicated in the Notice to Bidders.

**3. Pre-Bid Request for Information or Clarification.** Any questions regarding this bid shall be directed in writing to: Ashley Collins, Manager of Purchasing, College of the Sequoias, [ashleyco@cos.edu](mailto:ashleyco@cos.edu).

**4. Documents Accompanying Bid Proposal; Signatures.** The Bid Proposal must be submitted with: (a) the required Bid Security; (b) Subcontractors List; (c) Non-Collusion Affidavit; (d) Contractor's Certificate Regarding Workers' Compensation; (e) Prevailing Wage Compliance Certification; and (f) Verification of Contractor and Subcontractors' DIR Registration. The Bid Proposal and Non-Collusion Affidavit shall be executed by an individual duly authorized to execute the same on behalf of the Bidder.

**5. Bid Security.**

**5.1. Required Bid Security.** Bid Proposals should be accompanied by a certified cashier's check or bidder's bond from an admitted surety in the state of California (see Public Contract Code Article 41, §20651.5), for an amount not less than ten percent (10%) of the maximum amount of the Bid Proposal for the Work, inclusive of any additive Alternate Bid Item(s). The cashier's check or bidder's bond shall be made payable to the order of: Sequoias Community College District. The Bid Bond is due at the same date and time as the Bid Proposal and the bond shall be given as a guarantee that the Bidder will enter into the Contract if awarded the Work. Any Bid Proposal submitted without the required Bid Security is deemed 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.

**5.2. Bid Bond Original Signatures.** Notwithstanding provisions of the documents for the Work requiring that a Bid Bond submitted by a Bidder to meet Bid Security requirements must bear original signatures of the Bidder and the Attorney-In-Fact for the Surety issuing the Bid Bond, a Bid Proposal will not be rejected for non-responsiveness if it is submitted with a facsimile signature of the Surety's Attorney-In-Fact and the Bidder submits a copy of the Bid Bond bearing the original signature of the Surety's Attorney-In-Fact to the District not later than 4:00 P.M. the third (3rd) working day after the date Bid Proposals for the Work are publicly opened. The copy of the Bid Bond bearing the original signature of the Surety's Attorney-In-Fact must be delivered to the College of the Sequoias, Purchasing Department (Sequoia, Payroll 2) 915 S. Mooney Blvd., Visalia, CA 93277 prior to the date/time set forth above. A Bid

Proposal submitted with a Bid Bond bearing the facsimile signature of the Surety's Attorney-In-Fact without timely submittal of the original signature of the Surety's Attorney-In-Fact pursuant to the foregoing will be rejected for non-responsiveness.

- 5.3. **Forfeiture of Bid Security.** If the Bidder awarded the Contract fails or refuses to execute the Agreement within ten (10) calendar 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 priced Bid Proposal or may call for new bids, in its sole and exclusive discretion.
- 5.4. **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 Notice to Bidders) 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.

6. **Subcontractors.**

- 6.1. **Designation of Subcontractors; Subcontractors List.** In accordance with Public Contract Code §4104, the Subletting and Subcontracting Fair Practices Act (California Public Contract Code §4100 et seq.), each Bidder shall submit, on the form of Subcontractors List included with the Contract Documents, a list of its proposed Subcontractors for the proposed Work who will perform/provide portions of the Work valued at or more than one-half (1/2) of one percent (1%) of the amount proposed by the Bidder for the Work. Each Bidder's shall provide the "Kind of Work", "Company Name and Address", "DIR Registration #" and "License #" for each Subcontractor identified in the Bidder's Subcontractor List. If the portion of the Subcontractors List entitled "License #" is not completed on the form of Subcontractors List submitted by a Bidder concurrently with its Bid Proposal, such Bidder shall, not later than twenty-four (24) hours after the time when the District commences the public opening and reading of Bid Proposals, submit the Subcontractor's Contract License No. for each listed Subcontractor. Failure of a Bidder to provide all information required by the Subcontractors List within the time(s) set forth above will result in rejection of the Bidder's Bid Proposal for non-responsiveness.
- 6.2. **Work of Subcontractors.** All Bidders are referred to the Contract Documents and the notation therein that all Contract Documents are intended to be complementary 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.

**6.3. Subcontractor Bonds.** In accordance with California Public Contract Code §4108, if a Bidder requires a bond or bonds of its Subcontractor(s), whether the expense of procuring such bond or bonds are to be borne by the Bidder or the Subcontractor(s), such requirements shall be specified in the Bidder’s written or published request for sub-bids. Failure of the Bidder to comply with these requirements shall preclude the Bidder from imposing bonding requirements upon its Subcontractor(s) or rejection of a Subcontractor’s bid under California Public Contract Code §4108(b).

**7. Bidders Interested in More Than One Bid Proposal; Non-Collusion Affidavit.** No person, firm, corporation or other entity shall submit or be interested in more than one Bid Proposal for the same Work; provided, however, that a person, firm or corporation that has submitted a sub-proposal to a Bidder or who has quoted prices for materials to a Bidder is not thereby disqualified from submitting a sub-proposal, quoting prices to other Bidders or submitting a Bid Proposal for the proposed Work to the District. The form of Non-Collusion Affidavit 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 Affidavit with its Bid Proposal will render the Bid Proposal non-responsive.

**8. 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 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 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 the Contract.” The form of such Certificate is included as part of the Contract Documents.

**9. Prevailing Wage Rate.** In accordance with the provisions of §1700, et. seq. of the Labor Code, the Director of the Department of Industrial Relations of the State of California has determined the general prevailing rates of wages and employer payments for health and welfare, pension, vacation, travel time, and subsistence pay as provided for in §1773.8. Said wages are on file with the Department of Industrial Relations, Division of Apprenticeship Standards, 445 Golden Gate Avenue, San Francisco, CA, as well as the District, and are available to any interested party upon request. It shall be mandatory upon the Contractor and upon any Subcontractor to pay not less than the specified rates to all laborers, workers, and mechanics employed by them in the execution of the Contract.

**10. DIR Registration Requirements.**

**10.1. DIR Registration Verification.** A form of DIR Registration Verification is included with the Contract Documents. Each Bidder shall submit the completed DIR Registration Verification form executed by a duly authorized officer or employee of the Bidder with the Bidder’s Proposal for the Work; failure of a Bidder to do so will render the Bid Proposal non-responsive and rejected. The Bid Proposal of the Bidder who does not verify to all matters set forth in the DIR Registration Verification form will be rejected for non-responsiveness.

**10.2. Bidder DIR Registered Contractor Status.** In addition to other requirements established herein relating to Bidder qualifications in order to be deemed “qualified” to submit a proposal for the Work, the Bidder must be a DIR Registered Contractor when submitting a proposal. The proposal of a Bidder who is not a DIR Registered Contractor when the Bid Proposal is submitted will be rejected for non-responsiveness.

**10.3. Subcontractors’ DIR Registered Contractor Status.** All Subcontractors identified in a Bidder’s Subcontractors’ List must be DIR Registered Subcontractors at the time of submittal of the Bid Proposal for Work. The foregoing notwithstanding, a Proposal is not subject to the rejection for non-responsiveness when the Subcontractors List accompanying the Bid Proposal lists any Subcontractor(s) who is/are not DIR Registered Contractors if the listed Subcontractor(s) who are not DIR Registered become DIR Registered prior to the opening of proposals or become DIR Registered within twenty-four (24) hours of the opening of proposals pursuant to Labor Code §1771.1(c)(1) or (2). If the Subcontractors List accompanying the Bid Proposal lists any Subcontractor(s) who is/are not DIR Registered Contractors and the listed Subcontractor(s) who is/are not DIR Registered do not become DIR Registered prior to the opening of proposals or become DIR Registered within twenty-four (24) hours of the opening of proposals pursuant to Labor Code §1771.1(c)(1) or (2), such proposal is not subject to the rejection for non-responsiveness, provided that if the Bidder submitting the Subcontractors List with non-DIR Registered Subcontractor(s) is awarded the Contract for the Work, the Bidder shall request consent of the District to substitute another Subcontractor for the non-DIR Registered Subcontractor pursuant to Labor Code §1771.1(c)(3), without adjustment of the Contract Price or the Contract Time.

**11. Contractor’s License.** No Bid Proposal will be considered from a Bidder who, at the time Bid Proposals are publicly opened, is not licensed to perform the Work, 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.

**12. 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. 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.

**13. 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. However, no bidder shall visit the site without prior authorization; all Bidders are required to contact the College of the Sequoias –Purchasing Office for coordination of site visits. Submission of a Bid Proposal constitutes acceptance of the terms of this provision. Failure of a Bidder to receive or examine any of the Contract Documents or to inspect the Site prior to submitting a Bid Proposal 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 of 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.

**14. Bidder’s Assumptions.** Neither the District nor its employees or representatives shall be responsible for any assumptions used by the Bidder in calculating its Bid Proposal Amount including, without limitation, assumptions regarding costs of labor, materials, equipment and proposed but unapproved substitutions or alternatives. The successful Bidder, upon award of the Contract by the District, if any, will be required to complete the Work for the amount identified in the Bid Proposal, within the Contract Time and in accordance with the Contract Documents.

**15. Agreement.** The Agreement in which the successful Bidder, as Contractor, will be required to execute, is included in the Contract Documents and shall be carefully examined by the Bidder. The required number of executed copies of the Agreement is specified in the Contract Documents.

**16. Addenda or Bulletins.** Any addenda or bulletins issued during the time of bidding shall form a part of the drawings and specifications issued to Bidders for the preparation of their Proposals and shall constitute a part of the Contract Documents.

**17. Modifications.** 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 Bid Package (Specifications, Drawings and Contract Documents) pursuant to the Notice to Bidders. If the District issues any addenda during the bidding process, the failure of any Bidder to acknowledge such addenda in its Bid Proposal may render the Bid Proposal non-responsive and rejected. 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. A written request for interpretation, clarification or correction to the Bid Documents from an interested Bidder may be considered for publication via addenda only if received by the District at least seventy-two (72) hours prior to the scheduled closing time for receipt of Bid Proposals and the public opening thereof. The District will not respond to any requests for clarification or interpretation of the Bid Documents within seventy-two (72) hours of the scheduled bid opening.

**18. Award of Contract.**

- 18.1. Waiver of Irregularities or Informalities.** The District reserves the right to accept or reject any and all Bid Proposals, or to waive any irregularities or informalities in any Bid Proposal or in the bidding process.
- 18.2. Determination of Lowest Priced Bid Proposal; Award of Contract.** Award of the Contract for a Bid Package, if made by the District through action of its Board of Trustees, will be to the responsible Bidder whose Base Bid is the lowest of those bids received. The foregoing notwithstanding, the scope of the Contract awarded for a Bid Package will be limited to the Base Bid and such Alternate Bid Items as determined by the District in its discretion, based on available funding.
- 18.3. Alternate Bid Items.** If the Bid Proposal includes an Alternate Bid Item(s), the price(s) proposed by a Bidder for each Alternate Bid Item shall be set forth on the Bid Proposal. Failure of the Bidder to propose prices for each Alternate Bid Item listed on the Bid Proposal will render the Bid Proposal non-responsive and rejected.
- 18.4. Alternate Bid Items Not Included in Award of Contract.** Bidders are referred to the provisions of the Contract Documents permitting the District, during performance of the Work, to add or delete from the scope of the Work any or all of the Alternate Bid Items with the cost or credit of the same being the amount(s) set forth by each Alternate Bid Item in the Bid Proposal.
- 18.5. Responsive Bid Proposal.** A responsive Bid Proposal shall mean a Bid Proposal which conforms, in all material respects, to the Bid and Contract Documents.
- 18.6. Evidence of Responsibility.** The District may request that a bidder submit promptly to the District satisfactory evidence showing the Bidder's financial resources, the Bidder's experience in the type of work being required by the District, the Bidder's organization available for the performance of the Contract and any other required evidence of the Bidder's qualifications to perform the proposed Contract. The District may consider such evidence before making its decision to award the proposed Contract. Failure to submit evidence of a Bidder's responsibility to perform the proposed Contract may result in rejection of the Bid Proposal.
- 18.7. 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 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) whether the Bidder has accomplished similar construction work in a safe manner as reflected by the Workman's Compensation Experience Modification Rating of less than 1.25; and (xi) 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.

- 18.8. Bid Negotiations.** A bid response to any specific item of this bid with terms such as "negotiable", "will negotiate" or similar, will be considered as non-compliance with that specific item.
- 18.9. Notice of Intent to Award Contract.** Following the public opening and reading of Bid Proposals, the District will issue a Notice of Intent to Award the Contract, identifying the Bidder to whom the District intends to award the Contract and the date/time/place of the District's Board of Trustees meeting at which award of the Contract will be considered. The Bid Tabulation sheet identifying all Bid Proposals received by the District for the Work will also be included in the Notice of Award documents.
- 18.10. Public Records.** Bid Proposals and other documents responding to the Notice to Bidders become the exclusive property of the District upon submittal to the District. At such time as the District issues the Notice of Intent to Award the Contract pursuant to these Instructions to Bidders, all Bid Proposals and other documents submitted in response to the Notice to Bidders become a matter of public record and shall thereupon be considered public records, except for information contained in such Bid Proposals deemed to be Trade Secrets (as defined in California Civil Code §3426.1) and information provided in response to the Statement of Qualifications (if applicable). A Bidder that indiscriminately marks all or most of its Bid Proposal as exempt from disclosure as a public record, whether by the notations of "Trade Secret," "Confidential," "Proprietary," or otherwise, may render the Bid Proposal non-



responsive and rejected. The District is not liable or responsible for the disclosure of such records, including those exempt from disclosure if disclosure is deemed required by law, by an order of Court, or occurs through inadvertence, mistake or negligence on the part of the District or its officers, employees or agents. At such time as Bid Proposals are deemed a matter of public record, pursuant to the above, any Bidder or other party shall be afforded access for inspection and/or copying of such Bid Proposals, by request made to the District in conformity with the California Access to Public Records Act, California Government Code §§6250, et. seq. If the District is required to defend or otherwise respond to any action or proceeding wherein request is made for the disclosure of the contents of any portion of a Bid Proposal deemed exempt from disclosure hereunder, the Bidder submitting the materials sought by such action or proceeding agrees to defend, indemnify and hold harmless the District in any action or proceeding from and against any liability including, without limitation, attorneys' fees arising therefrom. The party submitting materials sought by any other party shall be solely responsible for the cost and defense in any action or proceeding seeking to compel disclosure of such materials; the District's sole involvement in any such action shall be that of a stakeholder, retaining the requested materials until otherwise ordered by a court of competent jurisdiction.

**18.11. Bid Protest.** Any Bidder submitting a Bid Proposal to the District may file a protest of the results of the public bid opening provided that each and all of the following are complied with: (i) the bid protest is in writing; (ii) the bid protest is filed and received by the District's Vice President of Administrative Services not more than seventy-two (72) hours following the date and time of the public bid opening; and (iii) the written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest; any matters not set forth in the written bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and credible evidence.

**19. Prices.** Bidders must quote prices F.O.B. the District unless otherwise noted. Prices should be stated in the unit specified and Bidders should quote each item separately.

**20. Taxes.** Taxes shall be included in all prices in the Bid Proposal. The District will pay only the State sales and use taxes. Federal excise taxes are not applicable to California Community College Districts.

**21. Quantities.** The quantities shown are approximate. The District reserves the right to increase or decrease quantities as desired.

**22. Samples.** On request, samples of the products being bid shall be furnished to the District.

**23. Substitution of Specified Project Items.** Pursuant to Public Contract Code §3400, the District will consider proposed substitutions to materials, equipment, products and other items specified in the Contract Documents ("Specified Project Items") only during the bidding process. No proposed substitutions will be considered nor will consent be granted to furnish and install any substitution

for Specified Project Items. The following is the process which bidders must comply with during the bidding process in order for the District to consider a proposed substitution of any Specified Project Items.

- 23.1. Bidder's Substitution Request.** Any Bidder seeking District consent to furnish or install a substitution for any Specified Project Item must submit a written request to the College of the Sequoias – Facilities Office no later than seven (7) days before the date of the bid opening. The District will consider proposed substitutions only if the Bidder proposing substitution complies with each and all of the following: (i) the request to consider a proposed substitution is in writing (“the Substitution Request”) and submitted to the correct location prior to the date set forth above; (ii) the Substitution Request identifies the Specified Project Item for which the substitution is proposed by reference to specific page(s) and detail(s) of the Drawings and/or specific section(s) of the Specifications; (iii) the proposed substitution is fully identified and described, including without limitation, manufacturer’s literature, specifications, catalog cut sheets, and other similar materials; and (iv) the Substitution Request incorporates all technical, aesthetic and other related materials demonstrating the equivalency of the proposed substitution to the Specified Project Item, including without limitation, Engineer/Consultant’s calculations, UL listing, ASTM standards and other similar matters.
- 23.2. District Review.** Provided that a Bidder has complied with the requirements for submittal of a substitution request, the District, and the District’s Design Consultants will review the Substitution Request and all accompanying materials to determine the equivalency of the proposed substitution to the Specified Project Item. If in such review, the District or Consultant request that the Bidder submitting the Substitution Request furnish additional or supplemental information/data, such Bidder must within the time establish furnish such information/data; failure to timely respond to any request for additional or supplemental information/data may result in the District’s summary rejection of the Substitution Request. Unless patently without substantive basis, the determination of equivalency or non-equivalency by the Consultant is deemed the Consultant’s exercise of discretion which shall not subject to administrative or judicial appeal or review.
- 23.3. Notice of Acceptance/Rejection of Proposed Substitution.** If upon considering a Substitution Request, the Consultant determines that the proposed substitution is not equivalent to the Specified Project Item, the Bidder submitting the Substitution Request will be notified in writing of the rejection of the proposed substitution. If upon considering a Substitution Request, the Consultant determines that the proposed substitution is equivalent to the Specified Project Item, the Bidder submitting the Substitution Request will be notified in writing of the District’s acceptance of the proposed substitution and an Addenda will be issued to all Bidders notifying Bidders of the District’s acceptance of a substitution for a Specified Project Item. In such event, the Bidders’ Bid Proposals may be based upon the Specified Project Item or the District accepted substitution for a Specified Project Item. The District reserves the right to make all decisions on product and vendor selections.

**23.4. District Standard Products.** If any portion of the Contract Documents describes a Specified Project Item as a District standard material, equipment or other product, pursuant to Public Contract Code §3400(b), the District will not consider any proposed substitutions to such District standard material, equipment or other product.

**24. Storage Container Costs and Delivery.** All costs for storage containers shall be borne by the Bidder. All products shall conform to the provisions set forth in the federal, county, state and city laws for their production, handling, processing and labeling. Packages shall be constructed to insure safe transportation to point of delivery. The Bidder shall be responsible for the security of material storage at all times.

**25. Contractor’s Liability Insurance.** Contractor shall purchase and maintain such insurance as will protect Contractor from claims for damages because of bodily injury, including death, and from claims for damages to property which may arise out of or result from Contractor’s operations under this Contract, whether such operations be by Contractor or by any Subcontractor or anyone directly or indirectly employed by any of them. This insurance shall name the District as an additional insured by separate endorsement and shall be written for not less than One Million Dollars (\$1,000,000) combined single limit, bodily injury and property damage. If the policy limits include a general aggregate, the general aggregate shall be a limit of not less than Two Million Dollars (\$2,000,000). Certificates of such insurance shall be filed with the District immediately following the District’s issuance of Notice of Award of the Bid Proposal. The Certificate of Insurance will state that the contractual liability assumed under this paragraph is covered and shall provide that a thirty (30) day notice of cancellation or reduction in coverage shall be provided to the District.

**26. Anti-Discrimination.** It is the policy of the District that in connection with all work performed under contracts, there will 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. The Contractor agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment Practice Act, beginning with Labor Code §1410, and Labor Code §1735. In addition, the Contractor agrees to require like compliance by any Subcontractors employed on the Work.

**27. Compliance with Immigration Reform and Control Act of 1986.** The Bidder is solely and exclusively responsible for employment of individuals for the Work of the Contract in conformity with the Immigration Reform and Control Act of 1986, 8 USC §1101 et seq. (the “IRCA”); the successful Bidder shall also require that any person or entity employing labor in connection with any of the Work of the Contract shall so similarly comply with the IRCA.

**28. Prevailing Law.** In the event of any conflict or ambiguity between these instructions and state or federal law or regulations, the latter shall prevail. Additionally, all equipment to be supplied or service to be performed under the Bid Proposal shall conform to all applicable requirements of local, state and federal law.

**29. Governing Law and Venue.** In the event of litigation, the bid documents, specifications and related matters shall be governed by and construed in accordance with the laws of the State of

California. Venue shall be with the appropriate state or federal court located in Tulare County.

**30. Rights and Remedies in the Event of Default.** If the Bidder defaults, the District may procure the articles or services from other sources and may recover the loss occasioned thereby from any unpaid balance due the Bidder or by proceeding against a Bidder’s Bond(s), if any, or by suit against the Bidder. The prices paid by the District shall be considered the prevailing market prices at the time such purchase is made.

**31. Liquidated Damages.** In accordance with Government Code §53069.85, for each calendar day completion of the Work is delayed beyond the time specified in the Agreement, Contractor agrees to forfeit and pay the Owner the specified amount(s) identified in the **Special Conditions, Article 9** (District Withhold of Liquidated Damages; Performance Bond Surety), which shall be deducted from any payments due to or to become due to the Contractor. Contractor shall review and fully understand the specified Liquidated Damages associated with each Milestone Event identified in the Project Schedule; see Special Conditions Articles 8 and 9 for additional information. Liquidated Damages shall be imposed until final completion of the entire work in conformity with all the terms, conditions, and requirements of the Contract Documents.

**32. Indemnity.** The Bidder must hold harmless and fully indemnify the District, its Board of Trustees, officers, employees and agents from all damages or claims for damages, costs or expenses that may at any time arise out of the Bidder’s performance, or failure to perform acts, required by the Contract Documents, including, but not limited to, infringement or use of any copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in connection with this Bid Package.

# BID PROPOSAL

(to be submitted with bid)

Project: **Bid#1534 Structure Cabling Upgrade, Visalia Campus**

To: Board of Trustees  
Sequoias Community College District  
915 S. Mooney Blvd.  
Visalia, CA 93277

Bids Proposals must be sealed and submitted to the College of the Sequoias, Purchasing Office (Sequoia Room 2), 915 S. Mooney Blvd., Visalia, CA 93277 no later than **Thursday, November 21, 2019 at or before 1:00 p.m.**

Work shall be completed within two hundred and forty (240) calendar days – see Project Manual (Special Conditions, Article 8. Milestones.) for Project Schedule restrictions and requirements. Estimated construction budget is **Eight Hundred thousand Dollars (\$800,000)**.

Pursuant to and in compliance with the Contract Documents, the undersigned Bidder, having examined documents pertaining to the project as well as having visited the site and examined conditions relating thereto, proposes and agrees to perform all construction required for **Bid#1534 - STRUCTURED CABLING UPGRADES, VISALIA CAMPUS** within the time stipulated, including all addenda for the sum(s) indicated below.

Scope of Work: Furnish all labor, equipment and materials and related items necessary and required to complete the Work as indicated for **Sequoias Community College District** pursuant to the attached minimum specifications.

In accordance with Public Contract Code §20103.8.b, the low Bidder for this project will be the lowest responsive, responsible Bidder whose Base Bid is the lowest of those bids received.

The receipt of the following addenda to the Drawings and Specification is acknowledged:

Addendum No(s): \_\_\_\_\_

**BASE BID:**

\_\_\_\_\_ (\$ \_\_\_\_\_)  
WRITTEN IN WORDS FIGURES

Execution and delivery of Documents: The Undersigned agree(s) to sign the proposed Agreement and furnish the required Bonds and Certificates of Insurance required with the Bid Proposal. If the Undersigned defaults in executing and delivering the above named Agreement, Bonds, and Certificates of Insurance, the accompanying Bid Bond or Bid Security and the money payable thereon shall become and remain the property of the District. The Undersigned agree(s) that this bid may not be withdrawn for a period of forty-five (45) days after the date set for the opening of bids. The undersigned declares under penalty of perjury under the laws of the State of California that the representations made in the bid are true and correct.

\_\_\_\_\_  
 SIGNATURE

\_\_\_\_\_  
 DATE

\_\_\_\_\_  
 PRINTED NAME

\_\_\_\_\_  
 TITLE

\_\_\_\_\_  
 COMPANY NAME (AS LICENSED)

\_\_\_\_\_  
 CONTRACTOR LICENSE NO.

/ \_\_\_\_\_ /  
 CLASS

\_\_\_\_\_  
 EXPIRATION DATE

\_\_\_\_\_  
 ADDRESS

\_\_\_\_\_  
 CITY

\_\_\_\_\_  
 STATE

\_\_\_\_\_  
 ZIP CODE

(\_\_\_\_\_)\_\_\_\_\_  
 PHONE

(\_\_\_\_\_)\_\_\_\_\_  
 FAX

\_\_\_\_\_  
 EMAIL

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## BID BOND

(to be submitted with bid)

KNOW ALL MEN BY THESE PRESENTS that we, the undersigned \_\_\_\_\_ as Principal, and \_\_\_\_\_, as Surety, are jointly and severally, along with their respective heirs, executors, administrators, successors and assigns, held and firmly bound unto Sequoias Community College District, hereinafter the "Owner" for payment of the penal sum hereof in lawful money of the United States, as more particularly set forth herein.

The condition of the above obligation is such that whereas the Principal has submitted the accompanying Bid Proposal dated \_\_\_\_\_, 20\_\_\_\_, which, inclusive of additive Bid Alternate Items, if any, is in the amount of \_\_\_\_\_ Dollars (\$\_\_\_\_\_ ) to the Owner for the Work commonly described as **Bid#1534 - Structured Cabling Upgrade, Visalia Campus.**

WHEREAS, subject to the terms of this Bond, the Surety is firmly bound unto the Owner in the penal sum of TEN PERCENT (10%) of the maximum amount of the Bid Proposal submitted by the Principal to the Owner, as set forth above.

NOW, THEREFORE,

- a. If said bid shall be rejected, or, in the alternative,
- b. If said bid shall be accepted and the Principal shall execute and deliver a Contract in the form of Agreement attached hereto and shall in all other respects perform the Agreement created by the acceptance of said bid;

Then this obligation shall be void, otherwise the same shall remain in force and effect, it being expressly understood and agreed that the liability of the Surety for any and all default of the Principal hereunder shall be the amount of this obligation as herein stated.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract on the Notice to Bidders, or to Work to be performed thereunder, or the Specifications accompanying the same, shall in anywise 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 said Contract or the Notice to Bidders, or to the Work, or to the Specifications.



In the event suit is brought upon this bond by Owner and judgement is recovered, Surety shall pay all costs incurred by Owner in such suit, including reasonable attorney's fees fixed by the court.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_. The name and corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body. In presence of:

---

---

**PRINCIPAL**

\_\_\_\_\_  
NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
CITY / STATE / ZIP CODE

(PRINCIPAL SEAL)

\_\_\_\_\_  
TELEPHONE

---

---

**SURETY**

\_\_\_\_\_  
NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
CITY / STATE / ZIP CODE

(SURETY SEAL)

\_\_\_\_\_  
TELEPHONE

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# SUBCONTRACTORS LIST

(to be submitted with bid)

Project: **Bid#1534 – Structure Cabling Upgrade, Visalia Campus**

Listed hereinafter is the name and address of each Subcontractor who will be employed and the kind of work which each will perform if the Contract is awarded to the aforesigned. I understand that under Public Contract Code §4100 through §4113\* I must clearly set forth the name and address of each Subcontractor who will perform work or labor or render service to me in or about the construction of the Work in an amount in excess of one-half of one percent (1/2 of 1%) of my total Bid Proposal amount and that as to any work which I fail to do so, I agree to perform that portion of Work myself or be subject to penalty under the act.

In case more than one Subcontractor is named for the same kind of work, i.e. installation, state the portion of work that each will perform. Provide Contractor License number and DIR Registration number for each Subcontractor. Vendors or suppliers of materials only need not 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 the Proposal.

KIND OF WORK	COMPANY NAME/LOCATION	LICENSE #	DIR REGISTRATION #
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\* NOTE: The above listing requirement will for purposes of this Proposal be construed in accordance with the provisions of the Subletting and Subcontracting Fair Practices Act (“The Act”) as set forth in Government Code §4100 through §4113. Also, for purposes of this Proposal and interpretation of The Act, a vendor will be considered to be a Prime Contractor regardless of whether such vendor is or is not a licensed Contractor.

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# NON-COLLUSION AFFIDAVIT

(to be submitted with bid)

Project: **Bid#1534 - Structure Cabling Upgrade, Visalia Campus**

I, \_\_\_\_\_ (Name), being first duly sworn, deposes and says that I am the (Title) of \_\_\_\_\_ (Contractor), the party making the foregoing bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true, and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ at \_\_\_\_\_ (City/County/State).

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

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
ADDRESS / CITY / STATE / ZIP CODE

(\_\_\_\_\_) \_\_\_\_\_  
PHONE

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# CONTRACTOR'S CERTIFICATE REGARDING WORKERS' COMPENSATION

(to be submitted with bid)

Project:     **Bid#1534 – Structured Cabling Upgrade, Visalia Campus**

Labor Code §3700 provides:

“Every employer except the State and all political subdivisions or institutions thereof, shall secure the payment of compensation in one or more of the following ways:

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

I am aware of the provisions of §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 those provisions before commencing the performance of the Work of this Contract.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

(In accordance with Article 5 [commencing at §1860], Chapter 1, Part 7, Division 2 of the Labor Code, this Certificate must be signed and filed with the awarding body prior to performing any work under this Contract.)

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# PREVAILING WAGE COMPLIANCE CERTIFICATION

(to be submitted with bid)

Project: **Bid#1534 - Structured Cabling Upgrade, Visalia Campus**

To: Sequoias Community College District  
915 S. Mooney Blvd.  
Visalia, CA 93277

I hereby certify that I will conform to the State of California Public Works Contract Requirements regarding wages; benefits; on-site audits with 48-hour notice; payroll records; and, apprentice and trainee employment requirements.

---

SIGNATURE

---

PRINTED NAME

---

TITLE

---

DATE

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## VERIFICATION OF CONTRACTOR AND SUBCONTRACTORS' DIR REGISTRATION

(to be submitted with bid)

Project: **Bid#1534 – Structured Cabling Upgrade, Visalia Campus**

I, \_\_\_\_\_ (Name), being first duly sworn, deposes and says that I am the  
(Title) of \_\_\_\_\_ (Bidder).

1. The Bidder is currently registered as a Contractor with the Department of Industrial Relations (“DIR”).
2. The Bidder’s DIR Registration Number is: \_\_\_\_\_. The expiration date of the Bidder’s DIR Registration is June 30, 20\_\_\_\_\_.
3. If the Bidder is awarded the Contract for the Work and the expiration date of the Bidder’s DIR Registration will occur: (i) prior to expiration of the Contract Time for the Work; or (ii) prior to the Bidder completing all obligations under the Contract for the Work, the Bidder will take all measures necessary to renew the Bidder’s DIR Registration so that there is no lapse in the Bidder’s DIR Registration while performing Work under the Contract.
4. The Bidder, if awarded the Contract for the Work, will remain a DIR Registered Contractor for the entire duration of the Work.
5. The Bidder has independently verified that each Subcontractor identified in the Subcontractors List submitted with the Bid Proposal of the Bidder is currently a DIR Registered Contractor.
6. The Bidder has provided the DIR Registration Number for each Subcontractor identified in the Bidder’s Subcontractors List or, within twenty-four (24) hours of the opening of Bid Proposals for the Work, the Bidder will provide the District with the DIR Registration Number for each subcontractor identified in the Bidder’s Subcontractors List.
7. The Bidder’s solicitation of Subcontractor bids included notice to prospective Subcontractors that: (i) all sub-tier Subcontractors must be DIR Registered Contractors at all times during performance of the Work; and (ii) prospective Subcontractors may only solicit sub-bids from and contract with lower-tier Subcontractors who are DIR Registered Contractors.

8. If any of the statements herein are false or omit material facts rendering a statement to be false or misleading, the Bidder's Bid Proposal is subject to rejection for non-responsiveness.
  
9. I have personal first had knowledge of all of the foregoing information.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ at  
\_\_\_\_\_  
(City/County/State).

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

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
ADDRESS / CITY / STATE / ZIP CODE

(\_\_\_\_\_)\_\_\_\_\_  
PHONE

## AGREEMENT

**THIS AGREEMENT** is made the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, in the city of Visalia, County of Tulare, State of California, by and between **Sequoias Community College District, 915 S. Mooney Blvd., Visalia, CA 93277**, hereinafter "Owner" and \_\_\_\_\_, hereinafter "Contractor," with its principal place of business in \_\_\_\_\_ (city/state).

**WITNESSETH**, that the Owner and the Contractor in consideration of the mutual covenants contained herein agree as follows:

**ARTICLE I: THE WORK.** Within the Contract Time and for the Contract Price, subject to adjustments thereto pursuant to the Contract Documents, the Contractor shall perform and provide all necessary labor, materials, tools, equipment, utilities, services and transportation to complete within the agreed Contract Time in a workmanlike manner, all of its Work required in connection with the Work of improvement commonly referred to as: **Bid#1534 - Structured Cabling Upgrade, Visalia Campus**. Contractor shall complete all of its Work covered by the Contract Documents, including without limitation, the Drawings and Specifications prepared by the Consultants, and all Contract Documents included in the Instructions to Bidders, along with all modifications and addenda thereto issued in accordance with the Contract Documents.

**ARTICLE II: CONTRACT DOCUMENTS.** The Contract Documents shall consist of this Agreement, the Specifications and Drawings, all addenda and bulletins thereto, the Notice to Bidders, Instructions to Bidders, General Conditions, Special Conditions, all documents forming a part of the Bid Package and any other documents signed by both parties relating to the subject matter of this Agreement. The intention of the Contract Documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the Work and the terms and conditions of payment therefor, and also to include all Work which may be reasonably inferable from the Contract Documents as being necessary to produce the intended results.

- 2.1 The Specifications and Drawings are intended to cooperate so that any work exhibited in the Drawings and not mentioned in the Specifications, or vice-versa, is to be executed the same as if both mentioned in the Specifications and set forth in the Drawings, to the true intent and meaning of said Drawings and Specifications when taken together.
- 2.2 The term "Work" as used in the Contract Documents includes all labor necessary to produce the construction required by the Contract Documents and all materials and equipment incorporated or to be incorporated in such construction.

**ARTICLE III: CONTRACT TIME.** The Work shall be commenced on the construction start date

identified in the Owner's Notice to Proceed; the Contractor shall achieve Substantial Completion of the Work within the Contract Time delineated within the construction schedule from and after the Commencement Date set forth in the Notice to Proceed.

**ARTICLE IV: CONTRACT PRICE.** The Owner shall pay the Contractor as full consideration for the Contractor's full, complete and faithful performance of the Contractor's obligations under the Contract Documents, subject to any additions or deduction as provided for in the Contract Documents, the Contract Price of \_\_\_\_\_ Dollars (\$\_\_\_\_\_). The Contract Price is based upon the Contractor's Base Bid Proposal plus the following Alternate Bid Item(s), if any: \_\_\_\_\_. The Owner's payment of the Contract Price shall be in accordance with the Contract Documents.

**ARTICLE V: CONTRACTOR.**

- 5.1 Contractor acknowledges that he is an independent Contractor and not an employee, agent or representative of the Owner. Contractor acknowledges that he shall be solely responsible for and shall indemnify and hold Owner harmless from all matters relating to payment of Contractor's employees, Subcontractors and others, including compliance with Social Security, payroll withholding and all other regulations governing such matters.
- 5.2 Contractor shall supervise and direct the Work using Contractor's best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.
- 5.3 Unless otherwise specifically noted, the Contractor shall provide and pay all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for the proper execution and completion of the Work.
- 5.4 Contractor shall at all times enforce strict discipline and good order among Contractor's employees, and shall not employ on the Work any unfit person or anyone not skilled in the task assigned.
- 5.5 Contractor represents and warrants to Owner that all materials and equipment incorporated in the Work will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. This warranty shall be in addition to any other warranty provided by law or Contract.
- 5.6 Contractor shall pay all sales, consumer, use and other similar taxes required by law and shall secure and pay for all permits, fees and licenses necessary for the execution

of the work.

- 5.7 Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the Work, and shall notify the Owner if any of the Contract Documents are at variance therewith.
- 5.8 Contractor shall be responsible for the acts and omissions of all Contractor's employees and all subcontractors, their agents and employees and all other persons performing any of the work under a contract with the Contractor.
- 5.9 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by Contractor's operations. At the completion of the work, Contractor shall remove all Contractor's waste materials and rubbish from and about the Project as well as Contractor's tools, construction equipment, machinery and surplus materials. If the Contractor fails to clean up, the Owner may do so and charge the cost to the Contractor.
- 5.10 Contractor has made an independent investigation of the job site, including underground conditions, and all other conditions that might affect the progress of the Work and is satisfied as to those conditions.
- 5.11 The Contractor shall perform all Work in compliance to CCR Title 24, Part 1, 4-343.

#### **ARTICLE VI: SUBCONTRACTS.**

- 6.1 Contractor agrees to bind every Subcontractor by the terms of this Contract as far as applicable to the Subcontractors work. If Contractor subcontracts any part of this Contract, Contractor shall be responsible to the Owner for any acts and omissions of its Subcontractors and of persons either directly or indirectly employed by its Subcontractors. Nothing contained in this agreement shall create a contractual relationship between Subcontractor and Owner.
- 6.2 Contractor shall not employ any Subcontractor to whom the Owner may have a reasonable objection. Owner's consent to or approval of any Subcontractor shall not relieve Contractor of its obligations under this Contract.
- 6.3 Substitution of Subcontractors shall be permitted only as authorized by Public Contract Code §4100, et. seq.
- 6.4 All Subcontractors shall be appropriately licensed to perform the Work for which employed in conformity with the laws of the State of California.

**ARTICLE VII: PAYMENT SHCEDULE.**

- 7.1 On or before the 25<sup>th</sup> day of each month, Contractor shall submit to Owner an application for payment specifying in detail the labor and materials incorporated into the Work during that month. Owner's review of the application for payment and estimate of the value of labor and materials incorporated into the Work shall be final.
- 7.2 Owner shall pay to Contractor, by +, 95% of the value of the requested payment as established by Owner, of the labor and materials incorporated into the Work during the previous month.
- 7.3 Upon the issuance and filing of a Notice of Completion, Owner shall have paid to Contractor, through monthly payments as set forth above, ninety-five percent (95%) of the Contract Sum. Five percent (5%) of the Contract Sum shall be retained by Owner for thirty-five (35) days following the filing of the Notice of Completion with the County in which the work was performed. Final payment of the retained percentage shall be made thirty-five (35) days after the Notice of Completion has been filed, provided that all Work has been completed and the Contract is then fully performed, subject to the provisions of Article VIII ("Payments") in this Agreement.

**ARTICLE VIII: PAYMENTS.**

- 8.1. Payments shall be made as provided in the provisions of Article VII in this Agreement.
- 8.2. Payments may be withheld on account of: (1) defective work not remedied; (2) claims filed; (3) failure of the Contractor to make payments properly to Subcontractors or for labor, materials, or equipment; (4) damage to another Contractor; or (5) unsatisfactory prosecution of the Work by the Contractor.
- 8.3. Final payment shall not be due until the Contractor has delivered to the Owner an unconditional release of all stop notices arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner indemnifying the Owner against such notice of a lien.

**ARTICLE IX: LIQUIDATED DAMAGES:**

- 9.1. The time limit specified in Article III ("Contract Time") is of the essence of the Contract. The Contractor shall complete the Work by the date specified in Article III unless Owner agrees to a written extension of time in writing.
- 9.2. The term "day" as used in the Contract Documents shall mean calendar day.



- 9.3. Failure to complete the work within the time and in the manner provided for by the Contract Documents shall subject the Contractor to Liquidated Damages.
- 9.4. The actual occurrence of damages and the actual amount of the damages which the Owner would suffer if the Work were not completed within the specified times set forth are dependent upon many circumstances and conditions which could prevail in various combinations, and from the nature of the case, it is impracticable and extremely difficult to fix the actual damages. Damages which the Owner would suffer in the event of delay include loss of the use of the project, disruption of school activities, costs of administration, inspection, supervision and the loss suffered by the public within the District by reason of the delay in the construction of the Project. Accordingly, the parties agree that the amount herein set forth shall be presumed to be the amount of damages sustained by the failure of the Contractor to complete the Project within the time specified.
- 9.5. The amount of Liquidated Damages to be paid by the Contractor to the Owner for failure to complete the Work specified is identified in the **Special Conditions, Article 9** (District Withhold of Liquidated Damages; Performance Bond Surety), which shall be deducted from any payments due to or to become due to the Contractor. Contractor shall review and fully understand the specified Liquidated Damages associated with each Milestone Event identified in the Project Schedule; see Special Conditions Articles 8 and 9 for additional information. Liquidated Damages shall be incurred by the Contractor for each calendar day by which completion of the Project is delayed beyond the completion date identified in the Notice to Proceed, such amount being the actual cash value agreed upon as the loss to the Owner resulting from the Contractor's default.
- 9.6. In the event the Contractor shall become liable for Liquidated Damages under this section, the Owner, in addition to all other remedies provided by law, shall have the right to withhold any and all retained percentages of payments, and to collect the interest thereon, which would otherwise be or become due the Contractor until the liability of the Contractor under this section has been finally determined. If the retained percentage is not sufficient to discharge all liabilities of the Contractor incurred under this Article, the Contractor and its sureties shall continue to remain liable to the Owner until all such liabilities are satisfied in full.

**ARTICLE X: AUTHORITY TO EXECUTE.** The individual(s) executing this Agreement on behalf of the Contractor is/are duly and fully authorized to execute this Agreement on behalf of Contractor and to bind the Contractor to each and every term, condition and covenant of the Contract Documents.

**ARTICLE XI: INDEMNITY.** Contractor shall indemnify, hold harmless and defend Owner and its Board of Trustees, officers, agents and employees from and against all claims, damages, losses and expenses, including reasonable costs and attorney's fees arising out of or resulting from Contractor's performance of the Work or Work performed by Contractor's agents or employees, or Subcontractors

employed on the Project, their agents or employees, or products installed on the Project by Contractor or Subcontractors, excepting only such injury or harm as may be caused solely and exclusively by Owner's fault or negligence. Such indemnification shall extend to all claims, demands, or liabilities occurring after completion of the Project as well as during the progress of the Work.

**IN WITNESS WHEREOF**, the Owner and the Contractor as of the date set forth above have duly executed this Agreement.

**CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTOR'S STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTOR'S STATE LICENSE BOARD, P.O. BOX 2600, SACRAMENTO, CALIFORNIA 95826.**

**"OWNER"**

**"CONTRACTOR"**

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
TITLE



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# PERFORMANCE BOND

(to be submitted upon Notice of Award)

Project: **Bid#1534 – Structured Cabling Upgrade, Visalia Campus**

The undersigned \_\_\_\_\_ (Contractor), hereinafter designated as the "Principal", and \_\_\_\_\_ (Surety), as Surety, are held and firmly bound unto Sequoias Community College District, in the County of Tulare, State of California, hereinafter called the "Owner", in the amount of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), for the payment of which sum well and truly made, we bind ourselves, our heirs, executors, administrators or successors, jointly and severally, firmly by these presents.

The conditions of this obligation is such that whereas the Principal entered into a certain Contract with the Owner, dated \_\_\_\_\_, 20\_\_\_\_.

NOW, THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term of said Contract and any extensions thereof that may be granted by the Owner, with or without notice to the Surety, and during the life of any guarantee required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, then, this obligation to be void, otherwise to remain in full force and virtue.

And the said Surety, for value received, hereby stipulates and agrees that no changes, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder, or the Specifications accompanying the same, shall in any ways affect its obligations of this bond and it does hereby waive notice of any such change, extension, alteration or additions.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their several seals the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seal of each corporate party being hereto affixed.

(To be signed by Principal and Surety, and acknowledged and Notarial Seal attached.)

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## PRINCIPAL

\_\_\_\_\_  
NAME

\_\_\_\_\_  
TITLE

---

ADDRESS

---

CITY / STATE / ZIP CODE

(PRINCIPAL SEAL)

---

TELEPHONE

---

**SURETY**

---

NAME

---

TITLE

---

ADDRESS

---

CITY / STATE / ZIP CODE

(SURETY SEAL)

---

TELEPHONE

**PAYMENT BOND**  
**(LABOR AND MATERIAL)**  
(to be submitted upon Notice of Award)

Project: **Bid#1534 – Structured Cabling Upgrade, Visalia Campus**

The undersigned \_\_\_\_\_ (Contractor), and hereinafter designated as the “Principal”, have entered into a contract for the furnishings of all materials and labor, services and transportation, necessary, convenient and proper to the project identified above.

Which said Agreement dated \_\_\_\_\_, 20\_\_\_\_, and all of the Contract Documents attached to or forming a part of said Agreement, are hereby referred to and made a part hereof; and WHEREAS, the Principal is required, before entering upon the performance of the Work, to file a good and sufficient bond with the body by whom the Contract is awarded to secure the claims arising under the said Agreement.

NOW, THEREFORE, THESE PRESENTS WITNESSETH:

That the said Principal and the undersigned \_\_\_\_\_ (Surety), a California admitted surety insurer, as Corporate Surety, are held and firmly bound into all laborers, material men and other persons referred to in said statutes in the sum of the Contract Price of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), which sum well and truly be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, and severally, by these presents.

The conditions of this obligation is that if the said Principal or any of his or its subcontractors, or the heirs, executors, administrators, successors or assigns of any, all, or either of them, shall fail to pay for any materials, provisions, provender or other supplies, or teams, 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 Act with respect to such work or labor, that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney’s fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgement therein rendered.

It is hereby expressly stipulated and agreed that this bond shall insure to the benefit of any and all persons, companies and corporations entitled to file claims so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the conditions of this bond be fully performed then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Contract or the Specifications accompanying the same shall in any manner affect its obligations of this bond and it does hereby waive notice of any such change, extension, alteration or additions.

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

(To be signed by Principal and Surety, and acknowledged and Notarial Seal attached.)

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**PRINCIPAL**

\_\_\_\_\_  
NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
CITY / STATE / ZIP CODE

(PRINCIPAL SEAL)

\_\_\_\_\_  
TELEPHONE

---

---

**SURETY**

\_\_\_\_\_  
NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
CITY / STATE / ZIP CODE

(SURETY SEAL)

\_\_\_\_\_  
TELEPHONE



# DRUG-FREE WORKPLACE CERTIFICATION

(to be submitted upon Notice of Award)

Project: **Bid#1534 – Structured Cabling Upgrade, Visalia Campus**

I, (Name) \_\_\_\_\_, the (Title) \_\_\_\_\_ of  
(Contractor) \_\_\_\_\_, declare, state and certify to all of the  
following:

1. I am aware of the provisions and requirements of California Government Code §8350 et seq., the Drug Free Workplace Act of 1990.
2. I am authorized to certify, and do certify, on behalf of Contractor that a drug free workplace will be provided by Contractor by doing all of the following:
  - A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in Contractor's workplace and specifying actions which will be taken against employees for violation of the prohibition;
  - B. Establishing a drug-free awareness program to inform employees about all of the following:
    - (i) The dangers of drug abuse in the workplace;
    - (ii) Contractor's policy of maintaining a drug-free workplace;
    - (iii) The availability of drug counseling, rehabilitation and employee assistance programs; and
    - (iv) The penalties that may be imposed upon employees for drug abuse violations;
  - C. Requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by subdivision (A), above, and that as a condition of employment by Contractor in connection with the Work of the Contract, the employee agrees to abide by the terms of the statement.

3. Contractor agrees to fulfill and discharge all of Contractor’s obligations under the terms and requirements of California Government Code §8355 by, inter alia, publishing a statement notifying employees concerning: (a) the prohibition of any controlled substance in the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Work of the Contract be given a copy of the statement required by California Government Code §8355(a) and requiring that the employee agree to abide by the terms of that statement.

4. Contractor and I understand that if the Owner determines that Contractor has either: (a) made a false certification herein, or (b) violated this certification by failing to carry out and to implement the requirements of California Government Code §8355, the Contract awarded herein is subject to termination, suspension of payments, or both. Contractor and I further understand that, should Contractor violate the terms of the Drug-Free Workplace Act of 1990, Contractor may be subject to debarment in accordance with the provisions of California Government Code §8350, et seq.

5. Contractor and I acknowledge that Contractor and I are aware of the provisions of California Government Code §§8350, et seq. and hereby certify that Contractor and I will adhere to, fulfill, satisfy and discharge all provisions of and obligations under the Drug-Free Workplace Act of 1990.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ at  
\_\_\_\_\_  
(City/County/State).

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

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
ADDRESS / CITY / STATE / ZIP CODE

(\_\_\_\_\_)\_\_\_\_\_  
PHONE

# EXCLUSION OF LEAD PRODUCTS

(to be submitted upon Notice of Award)

Project: **Bid#1534 - Structured Cabling Upgrade, Visalia Campus**

Pursuant to the provisions of the California Education Code for construction, modernization, or renovation of school facilities, lead based paint, lead plumbing, and solders, or other potential sources of lead contamination shall not be utilized in the construction of any new school facility or the modernization or renovation of any existing school facility. The Contractor agrees that sources and potential sources of lead contamination, whether in products or materials, will not be used in performing work under the Agreement. At completion of Work under the Agreement, the Contractor will warrant and represent to the Owner the following:

1. No sources or potential sources of lead contamination were used in performing Work under the Agreement.
2. Should any sources or potential sources of lead contamination be found to have been used by the Prime Contractor or any Subcontractor, supplier, or vendor on the Project, the Contractor will replace them, together with all related materials, at no cost to the Owner.
3. Should the replacement require any interruption in the normal operations of the school, the Contractor will pay all costs necessarily incurred to keep the school functioning with the least possible disruption of its day-to-day operations.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ at \_\_\_\_\_  
(City/County/State).

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

SIGNATURE	PRINTED NAME
-----------	--------------

ADDRESS / CITY / STATE / ZIP CODE

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

PHONE

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# GUARANTEE

(to be submitted upon completion of Project)

The undersigned \_\_\_\_\_ (Contractor) hereby warrants and guarantees that all work, materials, equipment and workmanship provided, furnished or installed by or on behalf of Contractor in connection with the work of improvement described as **Bid#1534 - Structured Cabling Upgrade, Visalia Campus** (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 recorded date of the Owner's Notice of Completion with the County; 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 Owner's issuance of the Notice to the Contractor of any defect(s) in the Work, materials, equipment or workmanship, Contractor authorizes the Owner, 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 Owner for all costs, expenses or fees incurred by the Owner in providing or performing such repairs, corrections or replacements within ten (10) days of the Owner'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.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
TITLE

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  - 5.2.2. Responsibilities of Prime Contractor upon Substitution of Subcontractor
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- 6.2. Comprehensive General Liability and Property Insurance
- 6.3. Builder's Risk "All-Risk" Insurance
- 6.4. Coverage Amounts
- 6.5. Evidence of Insurance; Subcontractor's Insurance
  - 6.5.1. Certificates of Insurance
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- 7.1. Substantial Completion of the Work within Contract Time
- 7.2. Progress and Completion of the Work
  - 7.2.1. Time of Essence
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    - 7.2.3.1. Items for Correction or Completion
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- 7.2.6. Final Acceptance
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    - 7.3.1.1. Bid Schedule
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    - 7.3.1.3. Base Line Construction Schedule
    - 7.3.1.4. Updated Construction Schedule
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    - 7.3.1.6. Construction Schedule(s)
    - 7.3.1.7. Three Week Look Ahead Schedules
  - 7.3.2. Bid Schedule
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  - 7.3.4. Baseline Construction Schedule
  - 7.3.5. Updated Construction Schedules
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- 7.5. Liquidated Damages
- 7.6. District's Right to Take Over Work
  - 7.6.1. Progress of Work
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- 8.1. Contract Price

- 8.2. Cost Breakdown; Cash Flow Projection
- 8.3. Progress Payments
  - 8.3.1. Applications for Progress Payments
  - 8.3.2. District's Review of Applications for Progress Payments
  - 8.3.3. Consultant's, Project Manager's, and District's Inspector Review of Applications for Progress Payments
  - 8.3.4. District's Disbursement of Progress Payments
    - 8.3.4.1. Timely Disbursement of Progress Payments
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    - 8.3.4.3. District's Right to Disburse Progress Payments by Joint Checks
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    - 8.3.6.1. Limitations upon Payment
    - 8.3.6.2. Materials or Equipment Delivered and Stored at the Site
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    - 8.3.6.4. Materials or Equipment in Fabrication or Transit
  - 8.3.7. Exclusions from Progress Payments
  - 8.3.8. Title to Work
  - 8.3.9. Substitute Security for Retention
- 8.4. Final Payment
  - 8.4.1. Application for Final Payment
  - 8.4.2. Conditions Precedent to Disbursement of Final Payment
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**ARTICLE 9: CHANGES**

- 9.1. Changes in the Work
- 9.2. Oral Order of Change in the Work
- 9.3. Prime Contractor Submittal of Data
- 9.4. Adjustment to Contract Price and Contract Time on Account of Changes to the Work
  - 9.4.1. Adjustment to Contract Price
    - 9.4.1.1. Mutual Agreement
    - 9.4.1.2. Application of Saylor Current Construction Costs
    - 9.4.1.3. Determination by the District
    - 9.4.1.4. Basis for Adjustment of Contract Price

- 9.4.1.4.1. Labor
- 9.4.1.4.2. Materials and Equipment
- 9.4.1.4.3. Construction Equipment
- 9.4.1.4.4. Mark-up on Costs of Changes to the Work
- 9.4.1.5. Prime Contractor Maintenance of Records
- 9.4.2. Adjustment to Contract Time
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- 9.5. Change Orders
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- 9.7. Construction Change Directive
- 9.8. Prime Contractor Notice of Changes
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**ARTICLE 10: SEPARATE CONTRACTORS**

- 10.1. District's Right to Award Separate Contracts
- 10.2. District's Coordination of Separate Contractors
- 10.3. Mutual Responsibility
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- 11.1. Tests; Inspections; Observations
  - 11.1.1. Prime Contractor's Notice
  - 11.1.2. Cost of Tests and Inspections
  - 11.1.3. Testing/Inspection Laboratory
- 11.2. Additional Tests, Inspections and Approvals
- 11.3. Delivery of Certificates
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**ARTICLE 12: UNCOVERING AND CORRECTION OF WORK**

- 12.1. Inspection of the Work
  - 12.1.1. Access to the Work
  - 12.1.2. Limitations upon Inspections
- 12.2. Uncovering of Work
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- 12.4. Correction of Work
- 12.5. Removal of Non-Conforming or Defective Work

- 12.6. Failure of Prime Contractor to Correct Work
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**ARTICLE 13: WARRANTIES**

- 13.1. Workmanship and Materials
- 13.2. Warranty Work
- 13.3. Guarantee
- 13.4. Survival of Warranties; Surety Obligations

**ARTICLE 14: SUSPENSION OF WORK**

- 14.1. District's Right to Suspend Work
- 14.2. Adjustments to Contract Price and Contract Time

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- 15.1. Termination for Cause
  - 15.1.1. District's Right to Terminate
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  - 15.1.3. Completion by the Surety
  - 15.1.4. Assignment and Assumption of Subcontracts
  - 15.1.5. Costs of Completion
  - 15.1.6. Prime Contractor Responsibility for Damages
  - 15.1.7. Conversion to Termination for Convenience
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- 16.1. Governing Law
- 16.2. Marginal Headings; Interpretation
- 16.3. Successors and Assigns
- 16.4. Cumulative Rights and Remedies; No Waiver
- 16.5. Severability
- 16.6. No Assignment by Prime Contractor
- 16.7. Gender and Number
- 16.8. Independent Prime Contractor Status
- 16.9. Notices
- 16.10. Disputes; Continuation of Work
- 16.11. Dispute Resolution; Arbitration
  - 16.11.1. Claims Under \$375,000.00

- 16.11.2. Arbitration
- 16.11.3. Government Code Claims
- 16.11.4. (Not Used)
- 16.11.5. Demand for Arbitration
- 16.11.6. Third Parties
- 16.11.7. Discovery
- 16.11.8. Arbitrator's Award
- 16.11.9. Costs
- 16.11.10. Confirmation of Award
- 16.11.11. (Not Used)
- 16.11.12. Limitation on Damages
- 16.11.13. Inapplicability of Bid Bond
- 16.12. Capitalized Terms
- 16.13. Attorney's Fees
- 16.14. Provisions Required by Law Deemed Inserted
- 16.15. Days
- 16.16. Entire Agreement



# GENERAL CONDITIONS

## ARTICLE 1: DEFINITIONS; GENERAL

**1.1. District.** The term "District" shall refer to the SEQUOIAS COMMUNITY COLLEGE DISTRICT unless otherwise stated, references to the "District" in the Contract Documents shall mean the District, the District's authorized representatives, including the Project Manager, if a Project Manager is designated, the District's Board of Trustees and the District's officers, employees, agents and representatives.

**1.2. Prime Contractor.** The Prime Contractor is the person or entity identified as such in the Agreement; references to "Prime Contractor" in the Contract Documents shall mean the Prime Contractor or the Prime Contractor's authorized representative. Each Prime Contractor shall enter into an Agreement with the District to perform a certain portion or portions of the Work. There may be more than one Prime Contractor under a Multiple Prime - PM project delivery system. Whenever the term "Contractor" in the singular or "Contractors" in the plural is used in this document, it shall refer individually and collectively to one or all of the Prime Contractors, as the context implies.

**1.3. Consultant.** The Consultant is the person or entity identified as such in the Agreement; references to the "Consultant" in the Contract Documents includes the Consultant's authorized representative, the Consultant's Consultants for the Work, and the Consultants' employees, agents and representatives.

**1.4. Project Manager.** The Project Manager, if any, is an independent contractor or employee retained by the District and is authorized and empowered to act on behalf of the District as set forth in the Contract Documents. The District reserves the right to remove or replace the Project Manager prior to completion of the Work without adjustment of the Contract Price or the Contract Time or otherwise affecting, limiting or restricting Contractor's obligations hereunder. References to the Project Manager in the Contract Documents shall mean the Project Manager or the Project Manager's authorized representative. The Project Manager's duties are to coordinate, expedite, manage, and supervise the Project. The Project Manager will provide an onsite Project Manager whose function is to represent the District in all on site construction matters, and coordinate the work of various individual Prime Contractors. References in the Contract Documents to "Construction Manager" or to "CM" shall be deemed references to the Project Manager. The Architect, Consultant, Project Inspector and/or related project consultants shall also be deemed references to the Project Manager. The District reserves the right to decide whether or not to employ a Project Manager on the Project.

**1.5. The Work.** The term "Work" shall be deemed to mean the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment or services provided or to be provided by the Prime Contractor to fulfill the Prime Contractor's obligations under the Contract Documents. The Work may constitute the whole or a part of the Project.

**1.6. The Project.** The Project is the total construction of the Work performed by the Prime Contractor under the Contract Documents which may be the whole or a part of the Project and which may include construction by the District or by separate Contractors to the District.

**1.7. Surety.** The Surety is the person or entity that executes, as surety, the Contractor's Labor and Material Payment Bond and/or Performance Bond.

**1.8. Subcontractors; Sub-Subcontractors.** A Subcontractor is a person or entity who has a direct contract with the Prime Contractor to perform a portion of the Work. The term "Subcontractor" does not include a separate Prime Contractor to the District or Subcontractors of any separate contractor. A Sub-Subcontractor is a person or entity of any tier, who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. As required by the context of usage, the term "Subcontractor" shall include Sub-Subcontractors.

**1.9. Material Supplier.** A Material Supplier is any person or entity who only furnishes materials, equipment or supplies for the Work without fabricating, installing or consuming them in the performance of the Work of the Contract.

**1.10. Drawings and Specifications.** The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing generally, the design, location and dimensions of the Work and may include without limitation, plans, elevations, sections, details, schedules or diagrams. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, criteria and workmanship for the Work and related services. The Drawings and Specifications are intended to delineate and describe the Work and its component parts so as to permit skilled and competent contractors to bid upon the Work and prosecute the same to completion. Large scale Drawings shall take precedence over smaller scale Drawings as to shape and details of construction. Figured dimensions on Drawings shall govern, but Work which is not dimensioned shall be as directed or required by field conditions. Specifications shall govern as to materials, workmanship and installation procedures.

**1.11. Special Conditions.** To the extent they are part of the Contract Documents, Special Conditions are special or supplemental provisions, not otherwise provided for in the Agreement or the General Conditions, which apply to the Work.

**1.12. Contract Documents.** The Contract Documents consist of the Agreement between the District and the Prime Contractor, Conditions of the Contract (whether General, Special, Supplemental or otherwise), Drawings, Specifications, including addenda thereto issued prior to execution of the Agreement and any other documents listed in the Agreement. The Contract Documents shall include modifications issued after execution of the Agreement. The Contract Documents form the Contract for Construction.

**1.13. Intent and Correlation of Contract Documents.**

- 1.13.1. **Work of the Contract Documents.** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work awarded to the Prime Contractor by the District. The Contract Documents are complementary and what is required by one shall be as binding as if required by all; performance by the Prime Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable there from as being necessary to produce the intended results. Organization of the Specifications into divisions, sections or articles, and the arrangement of Drawings shall not control the Prime Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Where any portion of the Contract Documents is silent and information appears elsewhere in the Contract Documents, such other portions of the Contract Documents shall control.
  
- 1.13.2. **Technical Terms.** Unless otherwise stated in the Contract Documents, words or terms which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.
  
- 1.13.3. **Conflict in Contract Documents.** Conflicts, inconsistencies or ambiguities in the Contract Documents shall be resolved by the Consultant in accordance with Article 3.1.9 of the General Conditions; where conflicts or inconsistencies arise between the Drawings and the Specifications, in resolving such conflicts or inconsistencies, the Consultant will be governed generally by the following standards: the Drawings are intended to describe matters relating to placement, type, quantity and the like; the Specifications are intended to describe matters relating to quality, materials, compositions, manufacturers and the like. If conflicts exist between portions of the Contract Documents regarding the quality of any item, product, equipment or materials, unless otherwise directed or authorized by the District, the Contractor shall provide the item, product, equipment or material of the highest or more stringent quality.

**1.14. Shop Drawings; Samples; Product Data ("Submittals").** Shop Drawings are diagrams, schedules and other data specially prepared for the Work by the Prime Contractor or a Subcontractor, Sub-Subcontractor, manufacturer, Material Supplier, or distributor to illustrate some portion of the Work. Samples are physical examples of materials, equipment or workmanship forming a part of, or to be incorporated into the Work. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Prime Contractor to illustrate materials or equipment for some portion of the Work. Shop Drawings, Samples and Product Data prepared or furnished by the Prime Contractor or any of its Subcontractors or Material Suppliers are collectively referred to as "Submittals."

**1.15. Division of the State Architect ("DSA").** The DSA is California's Division of the State Architect including without limitation the DSA's Office of Construction Services, Office of Design Services and the Office of Regulation Services; references to the DSA in the Contract Documents shall mean the DSA, its offices and its authorized employees and agents. The authority of the DSA over the Work and the performance thereof shall be as set forth in the Contract Documents and Title

24 of the California Code of Regulations.

**1.16. District's Inspector.** The District's Inspector is the individual designated and employed by the District in accordance with the requirements of Title 24 of the California Code of Regulations. The District's Inspector shall be authorized to act on behalf of the District as provided for in the Contract Documents and in Title 24 of the California Code of Regulations, as the same may be amended from time to time. References in the Contract Documents to the "Project Inspector" shall be deemed references to the "District's Inspector."

**1.17. Contract Document Terms.** As used in the Contract Documents, the term "provide" shall mean "provide complete in place" or to "furnish and install" such item. Unless otherwise provided in the Contract Documents, the terms "approved;" "directed;" "satisfactory;" "accepted;" "acceptable;" "proper;" "required;" "necessary" and "equal" shall mean as approved, directed, satisfactory, accepted, acceptable, proper, required, necessary and equal, in the opinion of the Consultant. The term "typical" as used in the Drawings shall require the installation or furnishing of such item(s) of the Work designated as "typical" in all other similar areas. Work in such other areas shall conform to that shown as "typical" or as reasonably inferable there from.

**1.18. Prime Contractor's Superintendent.** The Prime Contractor's Superintendent is the individual employed by the Prime Contractor whose principal responsibility shall be the supervision and coordination of the Work; the Prime Contractor's Superintendent shall not perform routine construction labor.

**1.19. Record Drawings.** The Record Drawings are a set of the Drawings marked by the Prime Contractor during the performance of the Work to indicate completely and accurately the actual as-built condition of the Work. The Record Drawings shall be sufficient for a capable and qualified draftsman to modify the Drawings to reflect and indicate the Work actually in place at Final Completion of the Work.

**1.20. Construction Equipment.** The term "Construction Equipment" shall be deemed to refer to equipment utilized for the performance of any portion of the Work, but which is not incorporated into the Work.

**1.21. Site.** The Site is the physical area designated in the Contract Documents for Prime Contractor's performance, construction and installation of the Work.

**1.22. Field Clarifications.** A written or graphic document consisting of supplementary details, instructions or information issued on behalf of the District which clarifies or supplements the Contract Documents and which becomes a part of the Contract Documents upon issuance. Field Clarifications do not constitute an adjustment of the Contract Time or the Contract Price, unless a Change Order relating to a Field Clarification is authorized and issued under the Contract Documents.

**1.23. Defective or Non-Conforming Work.** Defective or non-conforming Work is any Work which is unsatisfactory, faulty, incomplete, or deficient by: (a) not conforming to the requirements of the

Contract Documents; (b) not conforming to the standards of workmanship of the applicable trade or industry; (c) not being in compliance with the requirements of any inspection, reference, standard, test, or approval required by the Contract Documents; or (d) damage occurring prior to Final Completion of all of the Work.

**1.24. Delivery.** The term "delivery" used in conjunction with any equipment, materials or other items to be incorporated into the Work shall mean the unloading and storage in a protected condition pending incorporation into the Work.

**1.25. Notice to Proceed.** The Notice to Proceed is the written notice issued by or on behalf of the District to the Contractor authorizing the Contractor to proceed with commencement of the Work and which establishes the date for commencement of the Contract Time.

**1.26. Progress Reports; Verified Reports.** Progress Reports, if required, are written reports prepared by the Contractor and periodically submitted to the District in the form and content as required by the Contract Documents. Verified Reports are periodic written reports prepared by the Contractor and submitted to the DSA; Verified Reports shall be in such form and content as required by the applicable provisions of Title 24 of the California Code of Regulations. A material obligation of the Contractor is the preparation of complete and accurate Progress Reports, if required, and Verified Reports as well as the timely submission of the same.

**1.27. Substantial Completion.** "Substantial Completion" means the state in the progress of the Work, as determined by the Consultant, when all of the Work is complete and in accordance with the Contract Documents except only for correction of minor items which do not impair the District's ability to occupy and fully utilize the Work for its intended purposes.

**1.28. Final Completion.** The term "Final Completion" means the Work has been fully completed in accordance with the requirements of the Contract Documents.

**1.29. Days.** Unless otherwise expressly stated, references to "days" in the Contract documents shall be deemed to be calendar days.

**1.30. Laws.** The term "Laws" as used in the Contract Documents shall refer to all laws, ordinances, codes, rules and/or regulations promulgated by any governmental or quasi-governmental agency with jurisdiction over any portion of the Work and which apply to any portion of the Work. Laws refer to those enacted and in effect as of the execution of the Agreement, amendments thereto occurring during the performance of the Work, and subsequently enacted Laws which take effect during the performance of the Work. No adjustment of the Contract Time or the Contract Price shall be allowed for the Contractor's compliance with the Laws.

## ARTICLE 2: DISTRICT

### 2.1. Information Required of District.

- 2.1.1. Surveys; Site Information.** Information, if any, concerning physical characteristics of the Site, including without limitation, surveys, soils reports, and utility locations, to be provided by the District are set forth in the Contract Documents. Information not provided by the District or necessary information in addition to that provided by the District concerning physical characteristics of the site of the Work which is required for Prime Contractor's completion of the Work in accordance with the terms of the Contract Documents shall be obtained by Prime Contractor without adjustment to the Contract Price or the Contract Time.
- 2.1.2. Permits; Fees.** Except as otherwise provided in the Contract Documents, the District shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities which relate to the Work of the Prime Contractor under the Contract Documents. To the extent that permits and fees are designated as the responsibility of the Prime Contractor under the Contract Documents, the Prime Contractor shall be solely responsible for obtaining the same; the cost of such permits or fees and any costs incurred by the Prime Contractor in obtaining such permits shall be included within the Contract Price.
- 2.1.3. Drawings and Specifications.** Except as otherwise provided for in the Contract Documents, the District shall furnish the Prime Contractor, free of charge, the number of copies of the Drawings and the Specifications as set forth in the Special Conditions. All of the Drawings and the Specifications provided by the District to the Prime Contractor remain the property of the District; the Prime Contractor shall not use the Drawings or the Specifications in connection with any other work of improvement other than the Work of the Project.
- 2.1.4. Furnishing of Information.** Information or services to be provided by the District under the Contract Documents shall be furnished by the District with reasonable promptness to avoid delay in the orderly progress of the Work. Information about existing conditions furnished by the District under the Contract Documents is obtained from sources believed to be reliable, but the District neither guarantees nor warrants that such information is complete and accurate. The Prime Contractor shall verify all information provided by the District. To the extent that the Contract Documents depict existing conditions on or about the Site, or the Work involves the renovation, removal or remodeling of existing improvements or the Work involves any tie-in or other connection with any existing improvements, the conditions and/or existing improvements depicted in the Contract Documents are as they are believed to exist. Prime Contractor shall bear the risk of any variations between conditions or existing improvements depicted in the Contract Documents and those conditions or existing improvements actually encountered in the performance of the Work. The existence of any variations between conditions or existing improvements depicted in the Contract Documents and those actually encountered in the performance of the Work shall not result in any District liability therefore, nor shall any such variations result in an adjustment of the Contract Time or the

Contract Price.

**2.2. District's Right to Stop the Work.** In addition to the District's right to suspend the Work or terminate the Contract pursuant to the Contract Documents, the District, may, by written order, direct the Prime Contractor to stop the Work, or any portion thereof, until the cause for such stop work order has been eliminated if the Prime Contractor: (i) fails to correct Work which is not in conformity and in accordance with the requirements of the Contract Documents, or (ii) otherwise fails to carry out the Work in conformity and accordance with the Contract Documents. The right of the District to stop the Work hereunder shall not be deemed a duty on the part of the District to exercise such right for the benefit of the Prime Contractor or any other person or entity, nor shall the District's exercise of such right waive or limit the exercise of any other right or remedy of the District under the Contract Documents or at law.

**2.3. Partial Occupancy or Use.**

**2.3.1. District's Right to Partial Occupancy.** The District may occupy or use any completed or partially completed portion of the Work, provided that: (i) the District has obtained the consent of, or is otherwise authorized by, public authorities with jurisdiction thereof, to so occupy or use such portion of the Work and (ii) the District and the Prime Contractor have accepted, in writing, the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, utilities, damage to the Work, insurance and the period for correction of the Work and commencement of warranties required by the Contract Documents for such portion of the Work partially used or occupied by the District. In the event the Prime Contractor and the District are unable to agree upon the matters set forth in (ii) above, the District may nevertheless use or occupy any completed or partially completed portion of the Work, with the responsibility for such matters subject to resolution in accordance with the Contract Documents. Immediately prior to such partial occupancy or use of the Work, or portions thereof, the District, the District's Inspector, the Prime Contractor and the Consultant shall jointly inspect the portions of the Work to be occupied or to be used to determine and record the condition of the Work. Repairs, replacements or other corrective action noted in such inspection shall be promptly performed and completed by the applicable Prime Contractor so that the portion of the Work to be occupied or used by the District is in conformity with the requirements of the Contract Documents and the District's occupancy or use thereof is not impaired. The District's use or occupancy of the Work or portions thereof pursuant to the preceding shall not be deemed "completion" of the as that term is used in Public Contract Code § 7107. "Completion" for purposed of Public Contract Code §7107 shall occur only upon completion of the entirety of the Work of a Bid Package.

**2.3.2. No Acceptance of Defective or Nonconforming Work.** Unless otherwise expressly agreed upon by the District and the Prime Contractor, the District's partial occupancy or use of the Work or any portion thereof, shall not constitute

the District's acceptance of the Work not complying with the requirements of the Contract Documents or which is otherwise defective.

**2.4. The District's Inspector.** In addition to the authority and rights of the District's Inspector as provided for elsewhere in the Contract Documents, all of the Work shall be performed under the observation of the District's Inspector. The District's Inspector shall have access to all parts of the Work at any time, wherever located and whether partially or completely fabricated, manufactured, furnished or installed. The performance of the duties of the District's Inspector under the Contract Documents shall not relieve or limit the Prime Contractor's performance of its obligations under the Contract Documents.

- 2.4.1. Access to Work.** The Contractor shall provide the Project Inspector with access to all parts of the Work at any time, wherever located and whether partially or completely fabricated, manufactured, furnished or installed. The Project Inspector shall have the authority to stop Work if the Work is not in conformity with the Contract Documents.
- 2.4.2. Limitations on Project Inspector.** The Project Inspector does not have authority to interpret the Contract Documents or to modify the Work depicted in the Contract Documents. No Work inconsistent with the Contract Documents shall be performed solely on the basis of the direction of the Project Inspector, and the Contractor shall be liable to the District for the consequences of all Work performed on such basis.
- 2.4.3. Compliance with Project Inspector Non-Conforming Notices.** If, during the course of the Work, the Project Inspector issues any notice of non-conforming conditions (or other similar notices) in the Work in place or in progress, the Contractor shall immediately thereafter commence and diligently prosecute to completion, without adjustment to the Contract Time or the Contract Price, repairs, replacement or other corrections of such conditions. The District may, at the District's sole and exclusive discretion, withhold any portion of the Contract Price then or thereafter due the Contractor in an amount reasonably reflecting the anticipated costs to complete repairs, replacement or other corrections to the Work determined by the Project Inspector not be to in conformity with the Contract Documents. Without waiver or limitation of any other right or remedy of the District, the District may, after notice to the Contractor of the Contractor's failure to immediately commence and diligently prosecute to completion such actions as necessary to comply with any such notice issued by the Project Inspector, cause such corrective, remedial or other actions necessary to comply with any such notice. In such event, all costs, fees and expenses incurred by the District to cause such corrective, remedial and other actions to be undertaken and completed shall be the sole responsibility of the Contractor; the District may deduct such costs, fees or expenses from any portion of the Contract Price then or thereafter due the Contractor.



**ARTICLE 3: CONSULTANT/CONSULTANT****3.1. Consultant's Administration of the Contract.**

- 3.1.1. Administration of Contract.** The Consultant will provide administration of the Contract as described in the Contract Documents, and will be one of the District's representatives during construction until the time that Final Payment is due the Prime Contractor under the Contract Documents. The Consultant will advise and consult with the District, the Project Manager and the District's Inspector with respect to the administration of the Contract and the Work. The Consultant is authorized to act on behalf of the District to the extent provided for in the Contract Documents; and shall have the responsibilities and powers established by law, including Title 24 of the California Code of Regulations.
- 3.1.2. Periodic Site Inspections.** The Consultant will visit the Site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine, in general, if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. The Consultant will not be required to make exhaustive or continuous Site inspections to check quality or quantity of the Work. On the basis of Site observations as an Consultant, the Consultant will keep the District informed of the progress of the Work, and will endeavor to guard the District against defects and deficiencies in the Work.
- 3.1.3. Prime Contractor Responsibility for Construction Means, Methods and Sequences.** Each Prime Contractor shall be fully responsible for the construction means, methods, techniques, procedures and sequences necessary and appropriate to fully complete in a workmanlike manner of good quality free from defects and on time all of the work awarded to the Prime Contractor by District. The Consultant will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, these being solely the Prime Contractor's responsibility. The Consultant will not have control over or charge of and will not be responsible for acts or omissions of the Prime Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.
- 3.1.4. Verification of Applications for Payment.** In accordance with Article 8 hereof, the Consultant will review the Prime Contractor's Applications for Progress Payments and for Final Payment, verify the extent of Work performed and the amount properly due the Prime Contractor on such Application for Payment.
- 3.1.5. Rejection of Work.** The Consultant is authorized to reject Work which is defective or does not conform to the requirements of the Contract Documents. Whenever the Consultant considers it necessary or advisable, for implementation

of the intent of the Contract Documents, the Consultant will have authority to require additional inspections or testing of the Work, whether or not such Work is fabricated, installed or completed.

**3.1.6. Submittals.**

**3.1.6.1. Consultant of Record's Review.** The Consultant will review and approve or take other appropriate action upon the Prime Contractor's Submittals, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of Submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Prime Contractor as required by the Contract Documents. The Consultant 's review of the Prime Contractor's Submittals shall not relieve the Prime Contractor of its obligations under the Contract Documents. The Consultant's review of Submittals shall not constitute approval of safety measures, programs or precautions or, unless otherwise specifically stated by the Consultant, of any construction means, methods, techniques, sequences or procedures. The Consultant 's approval of a specific item in a Submittal shall not indicate approval of an assembly of which the item is a component with the Submittal(s) required and relating to such assembly have been reviewed by the Consultant.

**3.1.6.2. Time for Consultant's Review.** The Consultant's review of Submittals will be conducted promptly so as not to delay or hinder the progress of the Work or the activities of the Prime Contractor, the District or the District's separate Prime Contractors while allowing sufficient time, in the Consultant's reasonable professional judgment, to permit adequate review of Submittals. The foregoing notwithstanding, the Consultant's review and return of Submittals will conform with the time limits and other conditions, if any, set forth in the Specifications or Submittal Schedule if the Submittal Schedule is required by the other provisions of the Contract Documents.

**3.1.7. Changes to the Work; Change Orders.** The Consultant will prepare Change Orders, and may authorize minor Changes in the Work in accordance with Article 9.9 hereof.

**3.1.8. Completion.** The Consultant will conduct observations to determine the date or dates of Substantial Completion and the date of Final Completion, will receive and forward to the District, for the District's review and records, written

warranties and related documents required by the Contract Documents and assembled by the Prime Contractor, and will verify that the Prime Contractor has complied with all requirements of the Contract Documents and is entitled to receipt of Final Payment.

**3.1.9. Interpretation of Contract Documents; Consultant as Initial Arbiter of Disputes.**

**3.1.9.1. Authority of Consultant.** The Consultant will interpret and decide matters concerning the requirements of the Contract Documents on written request of either the District or the Prime Contractor. The Consultant's response to such requests will be made with reasonable promptness and within the time limits agreed upon, if any. If no agreement is reached establishing the time for the Consultant's review and response to requests under this Article 3.1.9, the Consultant shall be afforded a fifteen (15) day period after receipt of such request to review and respond thereto. Interpretations and decisions of the Consultant will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Consultant will endeavor to secure faithful performance by both the District and the Prime Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith. The Consultant's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents. If there is any disagreement, dispute or other matter in controversy between the District and the Contractor, in addition to other requirements established by the Contract Documents or by law, the submission of the same to the Consultant for its decision shall be a condition precedent to initiation of dispute resolution procedures.

**3.1.9.2. Request for Information.** In the event that the Prime Contractor shall encounter any condition which the Prime Contractor believes, in good faith and with reasonable basis, is the result of an ambiguity, conflict, error or omission in the Contract Documents (collectively "the Conditions"), it shall be the affirmative obligation of the Prime Contractor to timely notify the Consultant, in writing, of the Conditions encountered and to request information from the Consultant necessary to address and resolve any such Conditions before proceeding with any portion of the Work affected or which may be affected by such Conditions. In the event that the Prime Contractor shall fail to so timely notify the Consultant in writing of any Conditions encountered and the Prime Contractor proceeds to perform any portion of the Work containing or affected by such Conditions the Prime Contractor shall bear all costs associated with or

required to correct, remove, or otherwise remedy any portion of the Work affected thereby without adjustment of the Contract Time or the Contract Price. In requesting information of the Consultant to address and resolve any Conditions the Prime Contractor shall act with promptness in submitting any such written request so as to allow the Consultant a reasonable period of time to review, evaluate and respond to any such request, taking into account the then current status of the progress and completion of the Work and the actual or potential impact of any such Conditions upon the completion of the Work within the Contract Time. The Contract Time shall not be subject to adjustment in the event that the Prime Contractor shall fail to timely request information from the Consultant. The Consultant's responses to any such Prime Contractor request for information shall conform with the standards and time frame set forth in Article 3.1.9.1 of these General Conditions. The foregoing provisions notwithstanding, in the event that the Consultant reasonably determines that any of Prime Contractor's request(s) for information pursuant to this Article 3.1.9.2: (i) do not reflect adequate or competent supervision or coordination by the Prime Contractor or any Subcontractor; or (ii) do not reflect the Prime Contractor's adequate or competent knowledge of the requirements of the Work or the Contract Documents; or (iii) is not justified for any other reason, Prime Contractor shall be liable to the District for all costs incurred by the District associated with the processing, reviewing, evaluating and responding to any such request for information, including without limitation, fees of the Consultant and any other design consultant to the District. In responding to any of Prime Contractor's request(s) for information, the Consultant shall, in the response, indicate if the Consultant has made the determination pursuant to the preceding sentence and, if so, the amount of costs to be borne by the Prime Contractor for the processing, review, evaluation and response to the request for information. Thereafter, the District shall be authorized to deduct such amount from any portion of the Contract Price then or thereafter due the Prime Contractor.

**3.2. Communications; Project Manager and Consultant's Role.** All communications regarding the Work, the performance thereof or the Contract Documents shall be in writing; verbal communications shall be reduced to writing. Communications between the Prime Contractor and the District shall be through the Project Manager. All written communications between separate contractors, if any, shall be through the Project Manager. All written communications between the Prime Contractor and any Subcontractor, Material Supplier or others directly or indirectly engaged by the Prime Contractor to perform or provide any portion of the Work shall be available to the District, the Project Manager and the Consultant for review, inspection and reproduction as may be requested from time to time. Failure or refusal of the Prime Contractor to permit the District, the Project Manager or Consultant to review, inspect or reproduce such written communications may be deemed a default of Prime Contractor hereunder.

**3.3. Termination of Consultant or Project Manager; Substitute Consultant or Project Manager.** In case of termination of employment of the Consultant, the District shall appoint a substitute Consultant whose status under the Contract Documents shall be that of the Consultant.

#### **ARTICLE 4: THE PRIME CONTRACTOR**

##### **4.1. Prime Contractor Review of Contract Documents.**

- 4.1.1. Examination of Contract Documents.** The Prime Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the District pursuant to the Contract Documents and shall at once report to the Project Manager and Consultant any errors, inconsistencies or omissions discovered. If the Prime Contractor performs any Work knowing, or what with reasonable diligence it should have discovered or known, that such Work involves an error, inconsistency or omission in the Contract Documents without prior notice to the Project Manager and Consultant of the same, the Prime Contractor shall assume full responsibility for such performance and shall bear all attributable costs for correction of the same.
- 4.1.2. Field Measurements.** Prior to commencement of the Work, or portions thereof, the Prime Contractor shall take field measurements and verify field conditions at the Site and shall carefully compare such field measurements and conditions and other information known to the Prime Contractor with information provided in the Contract Documents. Errors, inconsistencies or omissions discovered shall be reported to the Consultant at once.
- 4.1.3. Dimensions; Layouts and Field Consulting.** Dimensions indicated in the Drawings are intended for reference only. The Drawings are intended to be diagrammatic and schematic in nature; the Prime Contractor shall be solely responsible for dimensioning and coordinating the Work of the Contract Documents. All field Consulting required for laying out the Work and establishing grades for earthwork operations shall be by the Prime Contractor at its expense. Any field Consulting or other Consulting to be provided or performed by the Prime Contractor under the Contract Documents and required or necessary for the proper execution or installation of the Work shall be provided and performed by the an Consultant duly registered under the laws of the State of California in the Consulting discipline for such portion of the Work.
- 4.1.4. Work in Accordance With Contract Documents.** The Prime Contractor shall perform all of the Work in strict conformity with the Contract Documents and approved Submittals.

##### **4.2. Site Investigation; Subsurface Conditions.**

- 4.2.1. Prime Contractor Investigation.** The Prime Contractor shall be responsible for, and by executing the Agreement acknowledges, that it has carefully examined the Site and has taken all steps it deems reasonably necessary to ascertain all conditions which may affect the Work, or the cost thereof, including, without limitation, conditions bearing upon transportation, disposal, handling or storage of materials; availability of labor or utilities; access to the Site; and the physical conditions and the character of equipment, materials, labor and services necessary to perform the Work. Any failure of the Prime Contractor to do so will not relieve it from the responsibility for fully and completely performing all Work without adjustment to the Contract Price or the Contract Time. The District assumes no responsibility to the Prime Contractor for any understandings or representations concerning conditions or characteristics of the Site, or the Work, made by any of its officers, employees or agents prior to the execution of the Agreement, unless such understandings or representations are expressly set forth in the Agreement.
- 4.2.2. Subsurface Data.** By executing the Agreement, the Prime Contractor acknowledges that it has examined the boring data and other subsurface data available and satisfied itself as to the character, quality and quantity of surface and subsurface materials, including without limitation, obstacles which may be encountered in performance of the Work, insofar as this information is reasonably ascertainable from an inspection of the Site, review of available subsurface data and analysis of information furnished by the District under the Contract Documents. Subsurface data or other soils investigation report provided by the District hereunder are not a part of the Contract Documents. Information contained in such data or report regarding subsurface conditions, elevations of existing grades or below grade elevations are approximate only and are neither guaranteed nor warranted by the District to be complete and accurate. The Prime Contractor shall examine all boring and other subsurface data to make its own independent interpretation of the subsurface conditions and acknowledges that its bid is based upon its own opinion of the conditions which may be encountered. The District assumes no responsibility for any conclusions or interpretations made by Prime Contractor on the basis of available subsurface data or other information furnished by District under the Contract Documents.
- 4.2.3. Subsurface Conditions.** If the Work under the Contract Documents involves digging trenches or other excavations that extend deeper than four feet below the surface, the Prime Contractor shall promptly and before the following conditions are disturbed, notify the District's Inspector, in writing, of any: (i) material that the Prime Contractor believes may be material that is hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I or Class II or Class III disposal site in accordance with provisions of existing law; (ii) subsurface or latent physical conditions at the site differing from those indicated; or (iii) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally

recognized as inherent in the Work or the character provided for in the Contract Documents. If upon notice to the District of the conditions described above and upon the District's investigation thereof, the District determines that the conditions so materially differ or involve such hazardous materials which require an adjustment to the Contract Price or the Contract Time, the District shall issue a Change Order in accordance with Article 9 hereof. In accordance with California Public Contract Code §7104, any dispute arising between the Prime Contractor and the District as to any of the conditions listed in (i), (ii) or (iii) above, shall not excuse the Prime Contractor from the completion of the Work within the Contract Time and the Prime Contractor shall proceed with all Work to be performed under the Contract Documents. The District reserves the right to terminate the Contract pursuant to Article 15.2 hereof should the District determine not to proceed because of any condition described in (i), (ii) or (iii) above.

#### 4.3. Supervision and Construction Procedures.

**4.3.1. Supervision of the Work.** Each Prime Contractor shall supervise and direct performance of its own Work in accordance with the Master Schedule prepared by the Project Manager, using the Prime Contractor's best skill and attention. The Prime Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract Documents, without interference with, disruption of, or delay to the work of other Contractors working on the Project, unless Contract Documents give other specific instructions concerning these matters. The Prime Contractor shall be responsible for inspection of portions of Work already performed under the Contract Documents to determine that such portions are in proper condition to receive subsequent Work.

**4.3.2. Responsibility for the Work; Coordination of the Work.** The Prime Contractor shall be responsible to the District for acts and omissions of the Prime Contractor's employees, Subcontractors and their agents and employees, and all other persons performing any portion of the Work under a contract with the Prime Contractor. The Prime Contractor shall not be relieved of the obligation to perform the Work in accordance with the Contract Documents either by activities or duties of the Project Manager, District's Inspector or the Consultant in the Consultant's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Prime Contractor. The Prime Contractor shall be responsible for all necessary or appropriate coordination of the Work and component parts thereof so that Substantial Completion of the Work will be achieved within the Contract Time and the Work will be completed for the Contract Price. The coordination of the Work is a material obligation of the Prime Contractor hereunder and shall include without limitation, conducting regular coordination meetings with its Subcontractors and Material Suppliers, sequencing the operations of Subcontractors and Material Suppliers, and

adapting its planned means, methods and sequences of construction operations as necessary to accommodate field or changed conditions at the Site.

- 4.3.3. Surveys.** The Prime Contractor shall prepare or cause to be prepared all detailed surveys necessary for performance of the Work, including without limitation, slope stakes, points, lines and elevations. The Prime Contractor shall be responsible for the establishment, location, maintenance and preservation of benchmarks, reference points and stakes for the Work. The cost of any surveys and the establishment, location, maintenance and preservation of benchmarks, reference points and stakes shall be included within the Contract Price. The Prime Contractor shall be solely responsible for all loss or costs resulting from the loss, destruction, disturbance or damage of benchmarks, reference points or stakes.
- 4.3.4. Construction Utilities.** The Prime Contractor shall arrange for the furnishing of and shall pay the costs of all utility services, including, without limitation, electricity, water, gas and telephone necessary for performance of the Work and the Prime Contractor's obligations under the Contract Documents. The Prime Contractor shall furnish and install necessary or appropriate temporary distributions of utilities, including meters, to the Site. Any such temporary distributions shall be removed by the Prime Contractor upon completion of the Work. The costs of all such utility services, including the installation and removal of temporary distributions thereof, shall be done by the Prime Contractor and included in the Contract Price.
- 4.3.5. Existing Utilities; Removal, Relocation and Protection.** In accordance with California Government Code §4215, the District shall assume the responsibility for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Site which are not identified in the Drawings, Specifications or other Contract Documents. Prime Contractor shall be compensated for the costs of locating, repairing damage not due to the Prime Contractor's failure to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Drawings, Specifications and other Contract Documents with reasonable accuracy and for equipment on the Site necessarily idled during such work. Prime Contractor shall not be assessed Liquidated Damages for delay in completion of the Work when such delay is caused by the failure of the District or of the utility to provide for removal or relocation of such utility facilities. Nothing in this Article 4.3.5 shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, meters and junction boxes, on or adjacent to the Site. In the event that Prime Contractor, in performing the Work, shall encounter utility facilities not identified by the District in the Drawings, Specifications, or other Contract Documents, the Prime Contractor shall immediately notify, in writing, the District, the District's inspector, the Consultant, the Project Manager and the utility. In the event that such utility



facilities are owned by a public utility, the public utility shall have the sole discretion to perform repairs or relocation work or permit the Prime Contractor to do such repairs or relocation work at a reasonable price.

**4.4. Labor and Materials.**

**4.4.1. Payment for Labor, Materials and Services.** Unless otherwise provided in the Contract Documents, the Prime Contractor shall provide and pay for labor, materials, equipment, tools, Construction Equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**4.4.2. Employee Discipline.** The Prime Contractor shall enforce strict discipline and good order among the Prime Contractor's employees, the employees of any Subcontractor or Sub-subcontractor, and all other persons performing any part of the Work at the Site. The Prime Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. The Prime Contractor shall dismiss from its employ and direct any Subcontractor or Sub-subcontractor to dismiss from their employment any person deemed by the District to be unfit or incompetent to perform Work and thereafter, the Prime Contractor shall not employ nor permit the employment of such person for performance of any part of the Work without the prior written consent of the District, which consent may be withheld in the reasonable discretion of the District.

**4.4.3. Prime Contractor's Superintendent.** The Prime Contractor shall employ a competent superintendent and all necessary assistants who shall be in attendance at the Site at all times during performance of the Work. The Prime Contractor's communications relating to the Work or the Contract Documents shall be through the Prime Contractor's superintendent. The superintendent shall represent the Prime Contractor and communications given to the superintendent shall be binding as if given to the Prime Contractor. The Prime Contractor shall dismiss the superintendent or any of his/her assistants if they are deemed, in the sole reasonable judgment of the District, to be unfit, incompetent or incapable of performing the functions assigned to them. In such event, the District shall have the right to approve of the replacement superintendent or assistant.

**4.4.4. Prohibition on Harassment.**

**4.4.4.1. District's Policy Prohibiting Harassment.** The District is committed to providing a campus and workplace free of sexual harassment and harassment based on factors such as race, color religion, national origin, ancestry, age, medical condition, marital status, disability or veteran status. Harassment includes without limitation, verbal, physical or visual conduct which creates an intimidating, offensive or

hostile environment such as racial slurs; ethnic jokes; posting of offensive statements, posters or cartoons or similar conduct. Sexual harassment includes without limitation the solicitation of sexual favors, unwelcome sexual advances, or other verbal, visual or physical conduct of a sexual nature.

**4.4.4.2. Prime Contractor's Adoption of Anti-Harassment Policy.** Prime Contractor shall adopt and implement all appropriate and necessary policies prohibiting any form of discrimination in the workplace, including without limitation harassment on the basis of any classification protected under local, state or federal law, regulation or policy. Prime Contractor shall take all reasonable steps to prevent harassment from occurring, including without limitation affirmatively raising the subject of harassment among its employees, expressing strong disapproval of any form of harassment, developing appropriate sanctions, informing employees of their right to raise and how to raise the issue of harassment and informing complainants of the outcome of an investigation into a harassment claim. Prime Contractor shall require that any Subcontractor or Sub-subcontractor performing any portion of the Work to adopt and implement policies in conformity with this Article 4.4.4.

**4.4.4.3. Prohibition on Harassment at the Site.** Prime Contractor shall not permit any person, whether employed by Prime Contractor, a Subcontractor, Sub-subcontractor, or any other person or entity, performing any portion of the Work at or about the Site to engage in any prohibited form of harassment. Any such person engaging in a prohibited form of harassment directed to any individual performing or providing any portion of the Work at or about the Site shall be subject to appropriate sanctions in accordance with the anti-harassment policy adopted and implemented pursuant to Article 4.4.4.2 above. Any person, performing or providing Work on or about the Site engaging in a prohibited form of harassment directed to any student, faculty member or staff of the District or directed to any other person on or about the Site shall be subject to immediate removal and shall be prohibited thereafter from providing or performing any portion of the Work. Upon the District's receipt of any notice or complaint that any person employed directly or indirectly by Prime Contractor in performing or providing the Work has engaged in a prohibited form of harassment, the District will promptly undertake an investigation of such notice or complaint. In the event that the District, after such investigation, reasonably determines that a prohibited form of harassment has occurred, the District shall promptly notify the Prime Contractor of the same and direct that the person engaging in such conduct be immediately removed from the Site. Unless the District's determination that a prohibited form of

harassment has occurred is grossly negligent or without reasonable cause, District shall have no liability for directing the removal of any person determined to have engaged in a prohibited form of harassment nor shall the Contract Price or the Contract Time be adjusted on account thereof. Prime Contractor and the Surety shall defend, indemnify and hold harmless the District and its employees, officers, board of trustees, agents, and representatives from any and all claims, liabilities, judgments, awards, actions or causes of actions, including without limitation, attorneys' fees, which arise out of, or pertain in any manner to: (i) the assertion by any person dismissed from performing or providing work at the direction of the District pursuant to this Article 4.4.4.3; or (ii) the assertion by any person that any person directly or indirectly under the employment or direction of the Prime Contractor has engaged in a prohibited form of harassment directed to or affecting such person. The obligations of the Prime Contractor and the Surety under the preceding sentence shall be in addition to, and not in lieu of, any other obligation of defense, indemnity and hold harmless whether arising under the Contract Documents, at law or otherwise; these obligations shall survive the completion of the Work or the termination of the Contract.

**4.5. Taxes.** The Prime Contractor shall pay, without adjustment of the Contract Price, all sales, consumer, use and other taxes for the Work or portions thereof provided by the Prime Contractor under the Contract Documents.

**4.6. Permits, Fees and Notices; Compliance with Laws.**

**4.6.1. Payment of Permits, Fees.** Unless otherwise provided in the Contract Documents, the Project Manager shall secure and pay for the building permits, other permits, governmental fees, licenses and inspections necessary or required for the proper execution and completion of the Work.

**4.6.2. Compliance with Laws.** The Prime Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and other orders of public authorities bearing on performance of the Work.

**4.6.3. Notice of Variation from Laws.** If the Prime Contractor knows, or has reason to believe, that any portion of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, regulations or rules, the Prime Contractor shall promptly notify the Consultant and the District's Inspector, in writing, of the same. If the Prime Contractor performs Work knowing, or with reasonable diligence should have known, it to be contrary to laws, statutes, ordinances, building codes, rules or regulations applicable to the Work without such notice to the Consultant and the District's Inspector, the Prime Contractor shall assume full responsibility for such Work and shall bear the

attributable costs arising or associated there from, including without limitation, the removal, replacement or correction of the same.

**4.7. Submittals.**

**4.7.1. Purpose of Submittals.** Shop Drawings, Product Data, Samples and similar submittals (collectively "Submittals") are not Contract Documents. The purpose for submission of Submittals is to demonstrate, for those portions of the Work for which Submittals are required, the manner in which the Prime Contractor proposes to provide or incorporate such item of the Work in conformity with the information given and the design concept expressed in the Contract Documents.

**4.7.2. Prime Contractor's Submittals.**

**4.7.2.1. Prompt Submittals.** The Prime Contractor shall review, approve and submit to the Project Manager and Consultant or such other person or entity designated by the District, the number of copies of Submittals required by the Contract Documents. All Submittals required by the Contract Documents shall be prepared, assembled and submitted by the Prime Contractor to the Consultant within the time frames set forth in the Submittal Schedule incorporated and made a part of the Master Schedule prepared by the Project Manager and as specified in Article 7 of these General Conditions. Prime Contractor's submission of Submittals in conformity with the Submittal Schedule is a material consideration of the Contract. In the event of Prime Contractor's failure or refusal to deliver Submittals to the Consultant in accordance with the Submittal Schedule, the Prime Contractor shall be subject to per diem assessments in the amount set forth in the Special Conditions for each day of delayed submission for any Submittal beyond the date set forth in the Submittal Schedule for Prime Contractor's submission of such Submittal. Prime Contractor and District acknowledge and agree that if Prime Contractor shall fail to deliver Submittals in accordance with the Submittal Schedule, the District will incur costs and expenses not contemplated by the Contract Documents, the exact amount of which are difficult to ascertain and fix. Prime Contractor and the District acknowledge and agree that the per diem assessment for delayed submission of Submittals set forth in the Special Conditions represents a reasonable estimate of costs and expenses the District will incur as a result of delayed submission of Submittals and that the same is not a penalty. Notwithstanding Prime Contractor's submission of all required Submittals in accordance with the Submittal Schedule, in the event that the District or the Consultant reasonably determines that all or any portion of such Submittals fail to comply with the requirements of Articles 4.7.2.2, 4.7.2.3 and 4.7.2.4 of these General Conditions and/or such Submittals are not otherwise complete and accurate so

as to require re-submission, Prime Contractor shall bear all costs associated with the review and approval of resubmitted Submittals, including without limitation Consultant's fees incurred in connection therewith; provided that such costs are in addition to, and not in lieu of, any per diem assessments imposed under this Article 4.7.2.1 for Prime Contractor's delayed submission of Submittals. In the event of the District's imposition of the per diem assessments due to the Prime Contractor's delayed submission of Submittals or in the event of the District's assessment of costs and expenses incurred to review incomplete or inaccurate Submittals, the District may deduct the same from any portion of the Contract Price then or thereafter due the Prime Contractor. Submittals not required by the Contract Documents or which do not otherwise conform to the requirements of the Contract Documents may be returned without action. No adjustment to the Contract Time or the Contract Price shall be granted to the Prime Contractor on account of its failure to make timely submission of any Submittal.

**4.7.2.2. Approval of Subcontractor Submittals.** All Submittals prepared by Subcontractors, of any tier, Material Suppliers, manufacturers or distributors shall bear the written approval of the Prime Contractor thereto prior to submission to the Consultant for review. Any Submittal not bearing the Prime Contractor's written approval shall be subject to return to the Prime Contractor for re-submittal in conformity herewith, with the same being deemed to not have been submitted. Any delay, impact or cost associated therewith shall be the sole and exclusive responsibility of the Prime Contractor without adjustment to the Contract Time or the Contract Price.

**4.7.2.3. Verification of Submittal Information.** By approving and submission of Submittals, the Prime Contractor represents to the District and Consultant that the Prime Contractor has determined and verified materials, field measurements, field construction criteria, catalog numbers and similar data related thereto and has checked and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents.

**4.7.2.4. Information Included in Submittals.** All Submittals shall be accompanied by a written transmittal or other writing by the Prime Contractor providing an identification of the portion of the Drawings or the Specifications pertaining to the Submittal, with each Submittal numbered consecutively for ease of reference along with the following information: (i) date of submission; (ii) project name; (iii) name of submitting Subcontractor; and (iv) if applicable, the revision number. The foregoing information is in addition to, and not in lieu of, any other information required for the Consultant's review, evaluation

and approval of the Prime Contractor's Submittals.

**4.7.2.5. Prime Contractor Responsibility for Deviations.** The Prime Contractor shall not be relieved of responsibility for correcting deviations from the requirements of the Contract Documents by the Consultant's approval of Submittals unless the Prime Contractor has specifically informed the Consultant in writing of such deviation at the time of submission of the Submittal and the Consultant has given written approval to the specific deviation. The Prime Contractor shall not be relieved of responsibility for errors or omissions in Submittals by the Consultant's approval thereof.

**4.7.2.6. No Performance of Work without Approval.** The Prime Contractor shall perform no portion of the Work requiring the Consultant's review and approval of Submittals until the Consultant has completed its review and granted its approval of such Submittal. The Prime Contractor shall not perform any portion of the Work forming a part of a Submittal or which is affected by a related Submittal until the entirety of the Submittal or other related Submittal has been fully approved. Such Work shall be in accordance with approved Submittals and other applicable portions of the Contract Documents.

**4.7.3. Consultant Review of Submittals.** The purpose of the Consultant's review of Submittals and the time for the Consultant's return of Submittals to the Prime Contractor shall be as set forth elsewhere in the Contract Documents, including without limitation, Article 3.1.6 of the General Conditions. If the Consultant returns a Submittal as rejected or requiring correction(s) and re-submission, the Prime Contractor, so as not to delay the progress of the Work, shall promptly thereafter resubmit a Submittal conforming to the requirements of the Contract Documents; the resubmitted Submittal shall indicate the portions thereof modified in order to obtain the Consultant's approval. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Consultant shall be entitled to rely upon the accuracy and completeness of such calculations and certifications accompanying Submittals. The Consultant's review of the Submittals is for the limited purposes described in the Contract Documents.

**4.7.4. Deferred Approval Items.** In the event that any portion of the Work is designated in the Contract Documents as a "Deferred Approval" item, Prime Contractor shall be solely and exclusively responsible for the preparation of Submittals for such item(s) and obtaining approval(s) thereof in a timely manner so as not to delay or hinder the completion of the Work within the Contract Time. Neither the Contract Time nor the Contract Price shall be subject to adjustment on account of the activities of the Prime in preparing submittals for Deferred Approval Items and obtaining approvals thereof.

#### 4.8. Materials and Equipment.

- 4.8.1. Specified Materials, Equipment.** References in the Contract Documents to any specific article, device, equipment, product, material, fixture, patented process, form, method or type of construction, by name, make, trade name, or catalog number, with or without the words "or equal" shall be deemed to establish a minimum standard of quality or performance, and shall not be construed as limiting competition.
- 4.8.2. Substitutions.** Pursuant to Public Contract Code §3400, the District has established an opportunity for the District's consideration of proposed substitutions of materials, equipment and other products designated in the Contract Documents ("Specified Project Items") during the bidding process. In accordance with Public Contract Code §3400, the District will not consider any proposed substitutions for Specified Project Items, except during the bidding process and in accordance with the process set forth in the Instructions for Bidders. If, during the bidding process, a request to furnish and install a substitution for any Specified Project Items was granted by the District, the Contractor may furnish and install either the Specified Project Items or the substitution(s) accepted by the District. Neither the Contract Time nor the Contract Price shall be increased on account of any substitution or alternative proposed by the Contractor and which is approved by the Consultant; provided, however, that in the event a substitution or alternative is approved by the Consultant and purchase, fabrication and/or installation or such approved substitution or alternative shall be less expensive than the originally specified item, the Contract Price shall be reduced by the actual cost savings realized by the Contractor's furnishing and/or installation of such approved substitution or alternative. The Contractor shall likewise be solely responsible for any increase in the cost of any approved substitution or alternative or any Work affected by such alternative or substitution.
- 4.8.3. Placement of Material and Equipment Orders.** Prime Contractor shall, after award of the Contract, promptly and timely place all orders for materials and/or equipment necessary for completion of the Work so that delivery of the same shall be made without delay or interruption to the timely completion of the Work. Prime Contractor shall require that any Subcontractor or Sub-Subcontractor performing any portion of the Work similarly place orders for all materials and/or equipment to be furnished by any such Subcontractor or Sub-Subcontractor in a prompt and timely manner so that delivery of the same shall be made without delay or interruption to the timely completion of the Work. Upon request of the Consultant, the Prime Contractor shall furnish reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, including without limitation, orders for materials and/or equipment to be provided, furnished or installed by any Subcontractor or Sub-Subcontractor.

**4.8.4. District's Right to Place Orders for Materials and/or Equipment.** Notwithstanding any other provision of the Contract Documents, in the event that the Prime Contractor shall, upon request of the Consultant, fail or refuse, for any reason, to provide reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, or should the District determine, in its sole and reasonable discretion, that any orders for materials and/or equipment have not been placed in a manner so that such materials and/or equipment will be delivered to the Site so the Work can be completed without delay or interruption, the District shall have the right, but not the obligation, to place such orders on behalf of the Prime Contractor. In the event that the District shall exercise the right to place orders for materials and/or equipment pursuant to the foregoing, the District's conduct in that regard shall not be deemed to be an exercise, by the District, of any control over the means, methods, techniques, sequences or procedures for completion of the Work, all of which remain the responsibility and obligation of the Prime Contractor pursuant to Article 4.3.1 hereof. Notwithstanding the right of the District to place orders for materials and/or equipment pursuant to the foregoing, the election of the District to exercise, or not to exercise, such right shall not relieve the Prime Contractor from any of Prime Contractor's obligations under the Contract Documents, including without limitation, completion of the Work within the Contract Time and for the Contract Price. In the event that the District shall exercise the right hereunder to place orders for materials and/or equipment on behalf of Prime Contractor pursuant to the foregoing, Prime Contractor shall reimburse the District for all costs and fees incurred by the District in placing such orders; such costs and fees may be deducted by the District from any portion of the Contract Price then or thereafter due the Prime Contractor.

**4.9. Safety.**

**4.9.1. Safety Programs.** The Prime Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Prime Contractor's safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code §8350 et seq.). Without limiting or relieving the Prime Contractor of its obligations hereunder, the Prime Contractor shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs.

**4.9.2. Safety Precautions.** The Prime Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site,



under care, custody or control of the Prime Contractor or the Prime Contractor's Subcontractors or Sub-subcontractors; and (iii) other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

- 4.9.3. **Safety Signs, Barricades.** The Prime Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities.
- 4.9.4. **Safety Notices.** The Prime Contractor shall give or post all notices required by applicable law and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- 4.9.5. **Safety Coordinator.** The Prime Contractor shall designate a responsible member of the Prime Contractor's organization at the Site whose duty shall be the prevention of accidents and the implementation and maintenance of safety precautions and programs. This person shall be the Prime Contractor's superintendent unless otherwise designated by the Prime Contractor in writing to the District's Inspector and the Consultant.
- 4.9.6. **Emergencies.** In an emergency affecting safety of persons or property, the Prime Contractor shall act, at the Prime Contractor's discretion, to prevent threatened damage, injury or loss.
- 4.9.7. **Hazardous Materials.**
  - 4.9.7.1. **Use of Hazardous Materials.** In the event that the Prime Contractor, any Subcontractor or anyone employed directly or indirectly by them shall use, at the Site, or incorporate into the Work, any material or substance deemed to be hazardous or toxic under any law, rule, ordinance, regulation or interpretation thereof (collectively "Hazardous Materials"), the Prime Contractor shall comply with all laws, rules, ordinances or regulations applicable thereto and shall exercise all necessary safety precautions relating to the use, storage or disposal thereof.
  - 4.9.7.2. **Prohibition on Use of Asbestos Construction Building Materials ("ACBMs").** Notwithstanding any provision of the Drawings or the Specifications to the contrary, it is the intent of the District that

ACBMs not be used or incorporated into any portion of the Work. In the event that any portion of the Work depicted in the Drawings or the Specifications shall require materials or products which the Prime Contractor knows, or should have known with reasonably diligent investigation, to contain ACBM's, Prime Contractor shall promptly notify the Consultant and the District's Inspector of the same so that an appropriate alternative can be made in a timely manner so as not to delay the progress of the Work. Prime Contractor warrants to the District that there are no materials or products used or incorporated into the Work which contain ACBM's. Whether before or after completion of the Work, if it is discovered that any product or material forming a part of the Work or incorporated into the Work contains ACBM's, the Prime Contractor shall at its sole cost and expense remove such product or material in accordance with any laws, rules, procedures and regulations applicable to the handling, removal and disposal of ACBM's and to replace such product or material with non-ACBM products or materials and to return the affected portion(s) of the Work to the finish condition depicted in the Drawings and Specifications relating to such portion(s) of the Work. Prime Contractor's obligations under the preceding sentence shall survive the termination of the Contract, the warranty period provided under the Contract Documents, the Prime Contractor's completion of the Work or the District's acceptance of the Work. In the event that the Prime Contractor shall fail or refuse, for any reason, to commence the removal and replacement of any material or product containing ACBM's forming a part of, or incorporated into the Work, within ten (10) days of the date of the District's written notice to the Prime Contractor of the existence of ACBM materials or products in the Work, the District may thereafter proceed to cause the removal and replacement of such materials or products in any manner which the District determines to be reasonably necessary and appropriate; all costs, expenses and fees, including without limitation fees and costs of consultants and attorneys, incurred by the District in connection with such removal and replacement shall be the responsibility of the Prime Contractor and the Prime Contractor's Performance Bond Surety.

- 4.9.7.3. Disposal of Hazardous Materials.** Prime Contractor shall be solely and exclusively responsible for the disposal of any Hazardous Materials on or about the Prime Contractor's obligations hereunder shall include without limitation, the transportation and disposal of any Hazardous Materials in strict conformity with any and all applicable laws, regulations, orders, procedures or ordinances.

#### **4.10. Maintenance of Documents.**

- 4.10.1. Documents at Site.** The Prime Contractor shall maintain at the Site: (i) one record copy of the Drawings, Specifications and all addenda thereto; (ii) Change Orders approved by the District and all other modifications to the Contract Documents; (iii) Submittals reviewed by the Consultant; (iv) Record Drawings; (v) Material Safety Data Sheets ("MSDS") accompanying any materials, equipment or products delivered or stored at the Site or incorporated into the Work; and (vi) all building and other codes or regulations applicable to the Work, including without limitation, Title 24, Part 2 of the California Code of Regulations. During performance of the Work, all documents maintained by Prime Contractor at the Site shall be available to the District, the Project Manager, the Consultant, the District's Inspector and DSA for review, inspection or reproduction. Upon completion of the Work, all documents maintained at the Site by the Prime Contractor pursuant to the foregoing shall be assembled and transmitted to the Consultant for delivery to the District.
- 4.10.2. Maintenance of Record Drawings.** During its performance of the Work, the Prime Contractor shall maintain Record Drawings, as described in Article 1.18 hereof, consisting of a set of the Drawings which are marked to indicate all field changes made to adapt the Work depicted in the Drawings to field conditions, changes resulting from Change Orders and all concealed or buried installations, including without limitation, piping, conduit and utility services. All buried or concealed items of Work shall be completely and accurately marked and located on the Record Drawings. The Record Drawings shall be clean and all changes, corrections and dimensions shall be marked in a neat and legible manner in a contrasting color. Record Drawings relating to the Structural, Mechanical, Electrical and Plumbing portions of the Work shall indicate without limitation, circuiting, wiring sizes, equipment/member sizing and shall depict the entirety of the as built conditions of such portions of the Work. The Record Drawings shall be continuously maintained by the Prime Contractor during the performance of the Work. At any time during the Prime Contractor's performance of the Work, upon the request of the District, the District's Inspector or the Consultant, the Prime Contractor shall make the Record Drawings maintained here under available for the District's review and inspection. The District's review and inspection of the Record Drawings during the Prime Contractor's performance of the Work shall be only for the purpose of generally verifying that Prime Contractor is continuously maintaining the Record Drawings in a complete and accurate manner; any such inspection or review shall not be deemed to be the District's approval or verification of the completeness or accuracy thereof. The failure or refusal of the Prime Contractor to continuously maintain complete and accurate Record Drawings or to make available the Record Drawings for inspection and review by the District may be deemed by the District to be Prime Contractor's default of a material obligation hereunder. Without waiving, restricting or limiting any other right or remedy of the District for the Prime Contractor's failure or refusal to continuously maintain the Record Drawings, the District may, upon reasonably determining that the Prime Contractor has not, or is not, continuously maintaining the Record Drawings in a

complete and accurate manner, take appropriate action to cause the continuous maintenance of complete and accurate Record Drawings, in which event all fees and costs incurred or associated with such action shall be charged to the Prime Contractor and the District may deduct the amount of such fees and costs from any portion of the Contract Price then or thereafter due the Prime Contractor. In accordance with Article 8.4.2 of these General Conditions, prior to receipt of the Final Payment, Prime Contractor shall deliver the Record Drawings to the Project Manager.

**4.11. Use of Site.** The Prime Contractor shall confine operations at the Site to areas permitted by law, ordinances or permits, subject to any restrictions or limitations set forth in the Contract Documents. The Prime Contractor shall not unreasonably encumber the Site or adjoining areas with materials or equipment. The Prime Contractor shall be solely responsible for providing security at the Site with all such costs included in the Contract Price. The District shall at all times have access to the Site.

**4.12. Clean-Up.** The Prime Contractor shall at all times keep the Site and all adjoining areas free from the accumulation of any waste material or rubbish caused or generated by performance of the Work. Without limiting the generality of the foregoing, Prime Contractor shall maintain the Site in a "rake-clean" standard on a daily basis. In the event that the Work of the Contract Documents includes painting and/or the installation of floor covering, prior to commencement of any painting operations or the installation of any flooring covering, the area and adjoining areas of the Site where paint is to be applied or floor covering is to be installed shall be in a "broom-clean" condition. Prior to completion of the Work, Prime Contractor shall remove from the Site all rubbish, waste material, excess excavated material, tools, Construction Equipment, machinery, surplus material and any other items which are not the property of the District under the Contract Documents. Upon completion of the Work, the Site and all adjoining areas shall be left in a neat and broom clean condition satisfactory to District. The District's Inspector or Project Manager shall be authorized to direct the Prime Contractor's clean-up obligations hereunder. If the Prime Contractor fails to clean up as provided for in the Contract Documents, the District may do so, and all costs incurred in connection therewith shall be charged to the Prime Contractor; the District may deduct such costs from any portion of the Contract Price then or thereafter due the Prime Contractor.

**4.13. Access to the Work.** The Prime Contractor shall provide the DSA, the District, the Project Manager, the District's Inspector, and the Consultant(s) with access to the Work, whether in place, preparation and progress and wherever located.

**4.14. Facilities and Information for the District's Inspector.**

**4.14.1. Information to District's Inspector.** The Prime Contractor shall furnish the District's Inspector access to the Work for obtaining such information as may be necessary to keep the District's Inspector fully informed respecting the progress, quality and character of the Work and materials, equipment or other items incorporated therein. The District's Inspector shall be authorized to exercise the District's rights under Article 2.2 of the General Conditions with respect to

stoppage of the Work.

**4.15. Patents and Royalties.** The Prime Contractor and the Surety shall defend, indemnify and hold harmless the District and its agents, employees and officers from any claim, demand or legal proceeding arising out of or pertaining, in any manner, to any actual or claimed infringement of patent rights in connection with performance of the Work under the Contract Documents.

**4.16. Cutting and Patching.** The Prime Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make the component parts thereof fit together properly. The Prime Contractor shall not damage or endanger any portion of the Work, or the fully or partially completed construction of the District or separate contractors by cutting, patching, excavation or other alteration. The Prime Contractor shall not cut, patch or otherwise alter the construction by the District or separate contractor without the prior written consent of the District or separate contractor thereto, which consent shall not be unreasonably withheld. The Prime Contractor shall not unreasonably withhold consent to the request of the District or separate contractor to cut, patch or otherwise alter the Work.

**4.17. Encountering of Hazardous Materials.** In the event the Prime Contractor encounters Hazardous Materials at the Site which have not been rendered harmless or for which there is no provision in the Contract Documents for containment, removal, abatement or handling of such Hazardous Materials, the Prime Contractor shall immediately stop the Work in the affected area, but shall diligently proceed with the Work in all other unaffected areas. Upon encountering such Hazardous Materials, the Prime Contractor shall immediately notify the District's Inspector and the Consultant, in writing, of such condition. The Prime Contractor shall proceed with the Work in such affected area only after such Hazardous Materials have been rendered harmless, contained, removed or abated. In the event such Hazardous Materials are encountered, the Prime Contractor shall be entitled to an adjustment of the Contract Time to the extent that the Work is stopped and Substantial Completion of the Work is affected thereby. In no event shall there be an adjustment to the Contract Price solely on account of the Prime Contractor encountering such Hazardous Materials.

**4.18. Wage Rates; Employment of Labor.**

**4.18.1. Determination of Prevailing Rates.** Pursuant to the provisions of Division 2, Part 7, Chapter I, Article 2 of the California Labor Code at §1770 et seq., the District has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the prevailing rate for holiday and overtime work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to execute the Contract. Holidays shall be as defined in the collective bargaining agreement applicable to each particular craft, classification or type of worker employed under the Contract. Per diem wages shall be deemed to include employer payments for health and welfare, pensions, vacation, travel time and subsistence pay as provided in California Labor Code §1773.8, apprenticeship or other training programs authorized by California Labor Code §3093, and similar purposes when the term

"per diem wages" is used herein. Holiday and overtime work, when permitted by law, shall be paid for at the rate of at least one and one-half (1 1/2) times the above specified rate of per diem wages, unless otherwise specified. The Prime Contractor shall post, at appropriate and conspicuous locations on the Site, a schedule showing all determined general prevailing wage rates.

- 4.18.2. **Payment of Prevailing Rates.** Each worker employed by the Prime Contractor, or any Subcontractor, of any tier, engaged in the Work, shall be paid not less than the general prevailing wage rate, regardless of any contractual relationship which may be alleged to exist between the Prime Contractor or any Subcontractor, of any tier, and such worker.
  
- 4.18.3. **Prevailing Rate Penalty.** The Prime Contractor shall, as a penalty, forfeit Fifty Dollars (\$50) to the District for each calendar day or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed for the Work by the Prime Contractor or by any Subcontractor, of any tier, in connection with the Work. Pursuant to California Labor Code §1775, the difference between such prevailing wage rates and the amount paid to each worker for each calendar day, or portion thereof, for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by the Prime Contractor.
  
- 4.18.4. **Payroll Records.** Pursuant to California Labor Code §1776, each Prime Contractor and each Subcontractor, of any tier, shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each person employed for the Work. The payroll records shall be certified and available for inspection at all reasonable hours at the principal office of the Prime Contractor on the following basis: (i) a certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his/her authorized representative on request; (ii) a certified copy of all payroll records shall be made available for inspection or furnished upon request to the District, the Division of Labor Standards Enforcement and the Division of Apprenticeship Standards of the Department of Industrial Relations; (iii) a certified copy of payroll records shall be made available upon request to the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided, the requesting party shall, prior to being provided the records, reimburse the cost of preparation by the Contractor, Subcontractors and the entity through which the request was made; the public shall not be given access to such records at the principal office of the Prime Contractor; (iv) the Prime Contractor shall file a certified copy of the payroll records with the entity that requested such records within ten (10) days after receipt of a written request; (v) any copy of records

made available for inspection as copies and furnished upon request to the public or any public agency by the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of the Prime Contractor or any Subcontractor, of any tier, performing a part of the Work shall not be marked or obliterated. The Prime Contractor shall inform the District of the location of payroll records, including the street address, city and county and shall, within five (5) working days, provide a notice of a change or location and address. In the event of noncompliance with the requirements of this Article 4.18.4, the Prime Contractor shall have ten (10) days in which to comply, subsequent to receipt of written notice specifying in what respects the Prime Contractor must comply herewith. Should noncompliance still be evident after such ten (10) day period, the Prime Contractor shall, as a penalty to the District, forfeit Twenty-Five Dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from any portion of the Contract Price then or thereafter due the Prime Contractor. The Prime Contractor is solely responsible for compliance with the foregoing provisions.

#### **4.18.5. Hours of Work.**

**4.18.5.1. Limits on Hours of Work.** Pursuant to California Labor Code §1810, eight (8) hours of labor shall constitute a legal day's work. Pursuant to California Labor Code §1811, the time of service of any worker employed at any time by the Prime Contractor or by a Subcontractor, of any tier, upon the Work or upon any part of the Work, is limited and restricted to eight (8) hours during anyone calendar day and forty (40) hours during anyone calendar week, except as hereafter provided. Notwithstanding the foregoing provisions, Work performed by employees of Prime Contractor or any Subcontractor, of any tier, in excess of eight (8) hours per day and forty (40) hours during anyone week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1 1/2) times the basic rate of pay.

**4.18.5.2. Penalty for Excess Hours.** The Prime Contractor shall pay to the District Twenty-five Dollars (\$25) for each worker employed on the Work by the Prime Contractor or any Subcontractor, of any tier, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and forty (40) hours in anyone calendar week, in violation of the provisions of the California Labor Code, unless compensation to the worker so employed by the Prime Contractor is not less than one and one-half (1 1/2) times the basic rate of pay for all hours worked in excess of eight

(8) hours per day.

**4.18.5.3. Prime Contractor Responsibility.** Any Work performed by workers necessary to be performed after regular working hours or on Sundays or other holidays shall be performed without adjustment to the Contract Price or any other additional expense to the District.

**4.18.6. Apprentices.**

**4.18.6.1. Employment of Apprentices.** All apprentices employed by the Prime Contractor to perform any of the Work shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which such apprentice is employed, and such individual shall be employed only for the work of the craft or trade to which such individual is registered. Only apprentices, as defined in California Labor Code §3077 who are in training under apprenticeship standards and written apprenticeship agreements under California Labor Code §§3070 et seq. are eligible to be employed for the Work. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which such apprentice is training.

**4.18.6.2. Apprenticeship Certificate.** When the Prime Contractor or any Subcontractor, of any tier, in performing any of the Work employs workers in any Apprenticeable Craft or Trade, the Prime Contractor and such Subcontractor shall apply to the Joint Apprenticeship Committee administering the apprenticeship standards of the craft or trade in the area of the site of the Work for a certificate approving the Prime Contractor or such Subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected, provided, however, that the approval as established by the Joint Apprenticeship Committee or Committees shall be subject to the approval of the Administrator of Apprenticeship. The Joint Apprenticeship Committee or Committees, subsequent to approving the Prime Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Prime Contractor or such Subcontractor in order to comply with California Labor Code § 1777 .5. The Prime Contractor and Subcontractors shall submit contract award information to the applicable Joint Apprenticeship Committee which shall include an estimate of journeyman hours to be performed under the Contract, the number of apprentices to be employed, and the approximate dates the apprentices will be employed. There shall be an affirmative duty upon the Joint Apprenticeship Committee or Committees, administering the apprenticeship standards of the crafts or trades in the area of the site of the Work, to ensure equal employment and affirmative action and



apprenticeship for women and minorities. Prime Contractors or Subcontractors shall not be required to submit individual applications for approval to local Joint Apprenticeship Committees provided they are already covered by the local apprenticeship standards.

**4.18.6.3. Ratio of Apprentices to Journeymen.** The ratio of Work performed by apprentices to journeymen, who shall be employed in the Work, may be the ratio stipulated in the apprenticeship standards under which the Joint Apprenticeship Committee operates, but in no case shall the ratio be less than one hour of apprentice work for each five hours of labor performed by a journeyman, except as otherwise provided in California Labor Code § 1777.5. The minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeymen. Any ratio shall apply during any day or portion of a day when any journeyman or the higher standard stipulated by the Joint Apprenticeship Committee, is employed at the site of the Work and shall be computed on the basis of the hours worked during the day by journeymen so employed, except for the land surveyor classification. The Prime Contractor shall employ apprentices for the number of hours computed as above before the completion of the Work. The Prime Contractor shall, however, endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the site of the Work. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Division of Apprenticeship Standards, upon application of a Joint Apprenticeship Committee, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification. The Prime Contractor or any Subcontractor covered by this Article and California Labor Code § 1777.5, upon the issuance of the approval certificate, or if it has been previously approved in such craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the apprenticeship standards. Upon proper showing by the Prime Contractor that it employs apprentices in such craft or trade in the State of California on all of its contracts on an annual average of not less than one apprentice to each five journeymen, the Division of Apprenticeship Standards may grant a certificate exempting the Prime Contractor from the 1-to-5 ratio as set forth in this Article and California Labor Code §1777.5. This Article shall not apply to contracts of Prime Contractors, or to contracts of specialty contractors not bidding for work through a Prime Contractor, involving less than Thirty Thousand Dollars (\$30,000) or twenty (20) working days. The term "Apprenticeable Craft or Trade," as used herein shall mean a craft or trade determined as an Apprenticeable occupation in accordance with rules and regulations prescribed by the Apprenticeship Council.

**4.18.6.4. Exemption from Ratios.** The Joint Apprenticeship Committee shall have the discretion to grant a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting the Prime Contractor from the 1-to-5 ratio set forth in this Article when it finds that anyone of the following conditions are met: (i) unemployment for the previous three-month period in such area exceeds an average of fifteen percent (15%) or; (ii) the number of apprentices in training in such area exceeds a ratio of 1-to-5 in relation to journeymen, or; (iii) the Apprenticeable Craft or Trade is replacing at least one-thirtieth (1/30) of its journeymen annually through apprenticeship training, either on a statewide basis or on a local basis, or; (iv) if assignment of an apprentice to any Work performed under the Contract Documents would create a condition which would jeopardize such apprentice's life or the life, safety or property of fellow employees or the public at large, or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman. When such exemptions from the 1-to-5 ratio between apprentices and journeymen are granted to an organization which represents Prime Contractors in a specific trade on a local or statewide basis, the member Prime Contractors will not be required to submit individual applications for approval to local Joint Apprenticeship Committees, provided they are already covered by the local apprenticeship standards.

**4.18.6.5. Contributions to Trust Funds.** The Prime Contractor or any Subcontractor, of any tier, who, performs any of the Work by employment of journeymen or apprentices in any Apprenticeable Craft or Trade and who is not contributing to a fund or funds to administer and conduct the apprenticeship program in any such craft or trade in the area of the site of the Work, to which fund or funds other Prime Contractors in the area of the site of the Work are contributing, shall contribute to the fund or funds in each craft or trade in which it employs journeymen or apprentices in the same amount or upon the same basis and in the same manner as the other Prime Contractors do, but where the trust fund administrators are unable to accept such funds, contractors not signatory to the trust agreement shall pay a like amount to the California Apprenticeship Council. The Division of Labor Standards Enforcement is authorized to enforce the payment of such contributions to such fund(s) as set forth in California Labor Code §227. Such contributions shall not result in an increase in the Contract Price.

**4.18.6.6. Prime Contractor's Compliance.** The responsibility of compliance with this Article for all Apprenticeable Trades or Crafts is solely and exclusively that of the Prime Contractor. All decisions of the Joint

Apprenticeship Committee(s) under this Article are subject to the provisions of California Labor Code §3081. In the event the Prime Contractor willfully fails to comply with the provisions of this Article and California Labor Code §1777.5, pursuant to California Labor Code §1777.7, the Prime Contractor shall: (i) be denied the right to bid on any public works contract for a period of one (1) year from the date the determination of non-compliance is made by the Administrator of Apprenticeship; and (ii) forfeit, as a civil penalty, Fifty Dollars (\$50) for each calendar day of noncompliance. Notwithstanding the provisions of California Labor Code §1727, upon receipt of such determination, the District shall withhold such amount from the Contract Price then due or to become due. Any such determination shall be issued after a full investigation, a fair and impartial hearing, and reasonable notice thereof in accordance with reasonable rules and procedures prescribed by the California Apprenticeship Council. Any funds withheld by the District pursuant to this Article shall be deposited in the General Fund or other similar fund of the District. The interpretation and enforcement of California Labor Code §1777.5 and §1777.7 shall be in accordance with the rules and procedures of the California Apprenticeship Council.

- 4.18.7. Employment of Independent Prime Contractors.** Pursuant to California Labor Code §1021.5, Prime Contractor shall not willingly and knowingly enter into any agreement with any person, as an independent contractor, to provide any services in connection with the Work where the services provided or to be provided requires that such person hold a valid contractor's license issued pursuant to California Business and Professions Code §7000 et seq. and such person does not meet the burden of proof of his/her independent contractor status pursuant to California Labor Code §2750.5. In the event that Prime Contractor shall employ any person in violation of the foregoing, Prime Contractor shall be subject to the civil penalties under California Labor Code §1021.5 and any other penalty provided by law. In addition to the penalties provided under California Labor Code §1021.5, Prime Contractor's violation of this Article 4.18.7 or the provisions of California Labor Code § 1021.5 shall be deemed an event of Prime Contractor's default under Article 15.1 of these General Conditions. The Prime Contractor shall require any Subcontractor or Sub-Subcontractor performing or providing any portion of the Work to adhere to and comply with the provisions of this Article 4.18.7.

**4.19. Assignment of Antitrust Claims.** Pursuant to California Government Code §4551, the Prime Contractor and its Subcontractor(s), of any tier, hereby offers and agrees to assign to the District all rights, title and interest in and to all causes of action they may have under Section 4 of the Clayton Act, (15 U.S.C. §15) or under the Cartwright Act (California Business and Professions Code §16700 et seq.), arising from purchases of goods, services or materials hereunder or any Subcontract. This assignment shall be made and become effective at the time the District tenders Final Payment to the Prime Contractor, without further acknowledgment by the parties. If the District receives, either

through judgment or settlement, a monetary recovery in connection with a cause of action assigned under California Government Code §4550 et seq., the assignor thereof shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the District any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the District as part of the Contract Price, less the expenses incurred by the District in obtaining that portion of the recovery. Upon demand in writing by the assignor, the District shall, within one (1) year from such demand, reassign the cause of action assigned pursuant to this Article if the assignor has been or may have been injured by the violation of law for which the cause of action arose: (i) the District has not been injured thereby; or (ii) the District declines to file a court action for the cause of action.

**4.20. Daily Progress Reports.** During the progress of the Work, the Contractor's superintendent or project manager shall prepare daily progress reports; not later than 12:00 P.M. of each Tuesday during the Work, the Contractor shall submit the prior daily progress reports for the prior week to the Project Manager. The contents of each daily progress report shall include: (i) workers of the Contractor and Subcontractors at the Site; (ii) weather conditions; (iii) portions of the Work completed or in progress; (iv) deliveries of major items of materials or equipment to the Site; (v) safety issues; and (vi) actual or potential schedule/progress impacts. The preparation and submittal of daily progress reports in strict conformity to the foregoing are material obligations of the Contractor under the Contract Documents. In addition to the rights of the District to withhold Progress Payments or the Final Payment as set forth elsewhere in the Contract Documents, the District may withhold Progress Payments and/or Final Payment until the Contractor has completed all daily progress reports and has submitted such daily progress reports to the Project Manager.

## ARTICLE 5: SUBCONTRACTORS

**5.1. Subcontracts.** Any portion of the Work performed for the Prime Contractor by a Subcontractor shall be pursuant to a written agreement between the Prime Contractor and such Subcontractor which specifically incorporates by reference the Contract Documents and which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents, including without limitation, the policies of insurance required under Article 6 of these General Conditions and obligates the Subcontractor to assume toward the Prime Contractor all the obligations and responsibilities of the Prime Contractor which by the Contract Documents the Prime Contractor assumes toward the District and the Consultant. The foregoing notwithstanding, no contractual relationship shall exist, or be deemed to exist, between any Subcontractor and the District, unless the Contract is terminated and District, in writing, elects to assume the Subcontract. Each Subcontract for a portion of the Work shall provide that such Subcontract may be assigned to the District if the Contract is terminated by the District pursuant to Article 15 hereof, subject to the prior rights, if any, of the Surety obligated under a bond relating to the Contract. The Prime Contractor shall provide to the District copies of all executed Subcontracts and Purchase Orders to which Prime Contractor is a party within thirty (30) days after Prime Contractor's execution of the Agreement. During performance of the Work, the Prime Contractor shall, from time to time, as and when requested by the District, the Consultant or the Project Manager provide the District with copies of any and all Subcontracts or Purchase Orders relating to the Work and all modifications thereto. The Prime Contractor's failure or refusal, for any reason, to provide copies of such Subcontracts or Purchase Orders in accordance with the two preceding sentences shall be deemed

Prime Contractor's default in the performance of a material term of the Contract Documents.

## **5.2. Substitution of Listed Subcontractor.**

**5.2.1. Substitution Process.** Any request of the Prime Contractor to substitute a listed Subcontractor will be considered only if such request is in strict conformity with this Article 5.2 and California Public Contract Code §4107. All costs incurred by the District, including without limitation, costs of the District's Inspector, the Consultant, the Project Manager or attorney's fees in the review and evaluation of a request to substitute a listed Subcontractor shall be borne by the Prime Contractor; such costs may be deducted by the District from the Contract Price then or thereafter due the Prime Contractor.

**5.2.2. Responsibilities of Prime Contractor upon Substitution of Subcontractor.** The District's consent to Prime Contractor's substitution of a listed Subcontractor shall not relieve Prime Contractor from its obligation to complete the Work within the Contract Time and for the Contract Price. The substitution of a listed Subcontractor shall not, under any circumstance, result in, or give rise to any to any increase of the Contract Price or the Contract Time on account of such substitution. In the event of the District's consent to the substitution of a listed Subcontractor, the Consultant shall determine the extent to which, if any, revised or additional Submittals will be required of the newly substituted Subcontractor. In the event that the Consultant determines that revised or additional Submittals are required of the newly substituted Subcontractor, the Consultant shall promptly notify the Prime Contractor, in writing, of such requirement. In such event, revised or additional Submittals shall be submitted to Consultant not later than thirty (30) days following the date of the Consultant's written notice to the Prime Contractor pursuant to the foregoing sentence; provided that if in the reasonable and good faith judgment of the Consultant, the progress of the Work or completion of the Work requires submission of additional or revised Submittals by the newly substituted Subcontractor in less than thirty (30) days, the Consultant shall so state in its written notice to the Prime Contractor. In the event that the revised or additional Submittals are not submitted by Prime Contractor within thirty (30) days, or such earlier time as determined by the Consultant pursuant to the preceding sentence, following the Consultant's written notice of the requirement for revised or additional Submittals, Prime Contractor shall be subject to the per diem assessments for late Submittals as set forth in Article 4.7.2.1 of these General Conditions. Any revised or additional Submittals required pursuant to this Article 5.2.2 shall conform to the requirements of Article 4.7 of these General Conditions. Prime Contractor shall reimburse the District for all fees and costs, including without limitation fees of the Consultant or any design consultant to the Consultant or the District and DSA fees, incurred or associated with the processing, review and evaluation of any revised or additional Submittals required pursuant to this Article 5.2.2; the District may deduct such fees and costs from any portion of the Contract Price then or thereafter due the Prime Contractor. In the event that additional or

revised Submittals are required pursuant to this Article 5.2.2, such requirement shall not result in an increase to the Contract Time or the Contract Price.

**5.3. Subcontractor's Work.** Whenever the Work of a Subcontractor is dependent upon the work of the Prime Contractor or another Subcontractor, the Prime Contractor shall require the Subcontractor to: (a) coordinate its Work with the dependent Work; (b) provide necessary dependent data and requirements; (c) supply and/or install items to be built into the dependent Work of others; (d) make appropriate provisions for dependent Work of others; (e) carefully examine and understand the portions of the Contract Documents (including Drawings, Specifications and Field Clarifications) and Submittals relating to the dependent Work is in proper condition for the Subcontractor's Work. If the dependent Work is not in a proper condition, the Subcontractor shall notify the Prime Contractor in writing and not proceed with the Subcontractor's Work until the dependent Work has been corrected or replaced and is in a proper condition for the Subcontractor's Work.

## **ARTICLE 6: INSURANCE; INDEMNITY; BONDS**

**6.1. Workers' Compensation Insurance; Employer's Liability Insurance.** The Prime Contractor shall purchase and maintain Workers' Compensation Insurance as will protect the Prime Contractor from claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed, whether such operations be by the Prime Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The Prime Contractor shall purchase and maintain Employer's Liability Insurance covering bodily injury (including death) by accident or disease to any employee, which arises out of the employee's employment by the Prime Contractor. The Employer's Liability Insurance required of the Prime Contractor hereunder may be obtained by the Prime Contractor as a separate policy of insurance or as an additional coverage under the Workers' Compensation Insurance required to be obtained and maintained by the Prime Contractor hereunder. The limits of liability for the Employer's Liability Insurance required hereunder shall be as set forth in the Bid Documents or Special Conditions.

**6.2. Comprehensive General Liability and Property Insurance.** The Prime Contractor shall purchase and maintain Commercial General Liability and Property Insurance as will protect the Prime Contractor from the types of claims set forth below which may arise out of or result from Prime Contractor's operations under the Contract Documents and for which the Prime Contractor may be legally responsible: (i) claims for damages because of bodily injury, occupational sickness or disease or death of the Prime Contractor's employees; (ii) claims for damages because of bodily injury, sickness or disease or death of any person other than the Prime Contractor's employees; (iii) claims for damages insured by usual personal injury liability coverage which are sustained (a) by a person as a result of an offense directly or indirectly related to employment of such person by the Prime Contractor, or (b) by another person; (iv) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from; (v) claims for damages because of bodily injury, death of a person or property damages arising out of ownership, maintenance or use of a motor vehicle; and (vi) contractual liability insurance applicable to the Prime Contractor's obligations under the Contract Documents.

**6.3. Builder's Risk "All-Risk" Insurance.** The Prime Contractor, during the progress of the Work and until Final Acceptance of the Work by the District upon completion of the entire Contract, shall maintain Builder's Risk "All-Risk" Completed Value Insurance Coverage on all insurable Work included under the Contract Documents which coverage is to provide extended coverage and insurance against vandalism and malicious mischief, perils of fire, sprinkler leakage, civil authority, sonic boom, collapse and flood upon the entire Work which is the subject of the Contract Documents, and including completed Work and Work in progress to the full insurable value thereof. Prime Contractor's Builders Risk Insurance shall include coverage and insurance against the perils of earthquake if so indicated in the Bid Documents or Special Conditions. Such insurance shall include the District as an additional named insured and any other person with an insurable interest designated by the District as an additional named insured. The Prime Contractor shall submit to the District for its approval all items deemed to be uninsurable. The risk of damage to the Work due to the perils covered by the Builder's Risk "All Risk" Insurance, as well as any other hazard which might result in damage to the Work, is that of the Prime Contractor and the Surety, and no claims for such loss or damage shall be recognized by the District, nor will such loss or damage excuse the complete and satisfactory performance of the Contract by the Prime Contractor.

**6.4. Coverage Amounts.** The insurance required of the Prime Contractor hereunder shall be written for not less than any limits of liability specified in the Contract Documents, or required by law, whichever is greater. In the event of any loss or damage covered by a policy of insurance required to be obtained and maintained by the Prime Contractor hereunder, the Prime Contractor shall be solely and exclusively responsible for the payment of the deductible, if any, under such policy of insurance, without adjustment to the Contract Price on account thereof.

**6.5. Evidence of Insurance; Subcontractor's Insurance.**

**6.5.1. Certificates of Insurance.** Prior to commencement of the Work, Prime Contractor shall deliver to the District Certificates of Insurance evidencing the insurance coverage required by the Contract Documents. Failure or refusal of the Prime Contractor to so deliver Certificates of Insurance may be deemed by the District to be a default of a material obligation of the Prime Contractor under the Contract Documents, and thereupon the District may proceed to exercise any right or remedy provided for under the Contract Documents or at law. The Certificates of Insurance and the insurance policies required by the Contract Documents shall contain a provision that coverages afforded under such policies will not be canceled or allowed to expire until at least thirty (30) days prior written notice has been given to the District. The insurance policies required of Prime Contractor hereunder shall also name the District as an additional insured as its interests may appear. Should any policy of insurance be canceled before Final Acceptance of the Work by the District and the Prime Contractor fails to immediately procure replacement insurance as required, the District reserves the right to procure such insurance and to deduct the premium cost thereof and other costs incurred by the District in connection therewith from any sum then or thereafter due the Prime Contractor under the Contract Documents. The Prime Contractor shall, from time to time, furnish the District, when requested, with satisfactory proof of coverage of each type of insurance required by the Contract

Documents; failure of the Prime Contractor to comply with the District's request may be deemed by the District to be a default of a material obligation of the Prime Contractor under the Contract Documents.

**6.5.2. Subcontractors' Insurance.** Prime Contractor shall require that every Subcontractor, of any tier, performing or providing any portion of the Work obtain and maintain the policies of insurance set forth in Articles 6.1 and 6.2 of these General Conditions; the coverage and limits of liability of such policies of insurance to be obtained and maintained by Subcontractors shall be as set forth in the Bid Documents or Special Conditions. The policies of insurance to be obtained and maintained by Subcontractors hereunder are in addition to, and not in lieu of, Prime Contractor obtaining and maintaining such policies of insurance. Each of the policies of insurance obtained and maintained by a Subcontractor hereunder shall conform to the requirements of this Article 6. Upon request of the District, Prime Contractor shall promptly deliver to the District Certificates of Insurance evidencing that the Subcontractors have obtained and maintained policies of insurance in conformity with the requirements of this Article 6. Failure or refusal of the Prime Contractor to provide the District with Subcontractors' Certificates of Insurance evidencing the insurance coverage required hereunder shall be deemed a material default of Prime Contractor hereunder.

**6.6. Maintenance of Insurance.** Any insurance bearing on the adequacy of performance of Work shall be maintained after the District's Final Acceptance of all of the Work for the full one (1) year correction of Work period and any longer specific guarantee or warranty periods set forth in the Contract Documents. Should such insurance be canceled before the end of any such periods and the Prime Contractor fails to immediately procure replacement insurance as specified, the District reserves the right to procure such insurance and to charge the cost thereof to the Prime Contractor. Nothing contained in these insurance requirements is to be construed as limiting the extent of the Prime Contractor's responsibility for payment of damages resulting from its operations or performance of the Work under the Contract Documents, including without limitation the Prime Contractor's obligation to pay Liquidated Damages. In no instance will the District's exercise of its option to occupy and use completed portions of the Work relieve the Prime Contractor of its obligation to maintain insurance required under this Article until the date of Final Acceptance of the Work by the District, or such time thereafter as required by the Contract Documents. The insurer providing any insurance coverage required hereunder shall be to the reasonable satisfaction of the District.

**6.7. Prime Contractor's Insurance Primary.** All insurance and the coverage there under required to be obtained and maintained by Prime Contractor hereunder, if overlapping with any policy of insurance maintained by the District, shall be deemed to be primary and noncontributing with any policy maintained by the District and any policy or coverage there under maintained by District shall be deemed excess insurance. To the extent that the District maintains a policy of insurance covering property damage arising out of the perils of fire or other casualty covered by the Prime Contractor's Builder's Risk Insurance or the Comprehensive General Liability Insurance of the Prime Contractor or any Subcontractor, the District, Prime Contractor and all Subcontractors waive rights of subrogation against the others. The costs for obtaining and maintaining the insurance coverage



required herein shall be included in the Contract Price.

**6.8. Indemnity.** Unless arising solely out of the District's active negligence, gross negligence or willful misconduct, the Prime Contractor shall indemnify, defend and hold harmless the Indemnified Parties who are: (i) the District and its Board of Trustees, Trustees officers, employees, agents and representatives (including without limitation, the District's Inspector); (ii) the Consultant and its consultants for the Work and their respective agents and employees; and (iii) the Construction Manager and its agents and employees from and against any and all claims, demands or liability whether for damages, losses or other relief, including, without limitations attorney's fees and costs incurred or arising there from. The foregoing shall include without limitation: (i) injuries to or death of persons; (ii) damage to property; (iii) theft or loss of property, resulting from, in whole or part, any acts, omissions or other conduct of the Prime Contractor, any of Prime Contractor's Subcontractors, of any tier, or any other person or entity employed directly or indirectly by Prime Contractor in connection with the Work and their respective agents, officers or employees. (iv) Stop Notice claims asserted by any person or entity in connection with the Work of each Prime Contractor; and (v) other losses, liabilities, damages or costs resulting from, in whole or part, any acts, omissions or other conduct of the Prime Contractor, any of such Prime Contractor's Subcontractors, of any tier, or any other person or entity employed directly or indirectly by such Prime Contractor in connection with the Work and their respective agents, officers or employees. The obligations of the Prime Contractor, as set forth in (v) above, shall include, without limitation losses, costs, expenses, damages and other claims asserted by any other contractor to the District in connection with the Work, the Project or in connection with a work of improvement related to or affected by the Work. In the event that any action or proceeding, whether judicial, administrative, arbitration or otherwise, shall be commenced on account of any claim, demand or liability subject to Prime Contractor's obligations hereunder, and such action or proceeding names the District as a party thereto, the Prime Contractor shall, at its sole cost and expense, defend the District in such action or proceeding with counsel reasonably satisfactory to District. In the event that there shall be any judgment, award, ruling, settlement or other relief; Prime Contractor shall indemnify and hold harmless the District from any and all liability or responsibility arising out of any such judgment, award, ruling, settlement or relief. The Prime Contractor's obligations hereunder shall be binding upon Prime Contractor's Performance Bond Surety and these obligations shall survive notwithstanding Prime Contractor's completion of the Work or the termination of the Contract.

**6.9. Payment Bond; Performance Bond.** Prior to commencement of the Work, the Prime Contractor shall furnish a Performance Bond as security for Prime Contractor's faithful performance of the Contract and a Labor and Material Payment Bond as security for payment of persons or entities performing work, labor or furnishing materials in connection with Prime Contractor's performance of the Work under the Contract Documents. Unless otherwise stated in the Special Conditions, the amounts of the Performance Bond and the Payment Bond required hereunder shall be one hundred percent (100%) of the Contract Price. Said Labor and Material Payment Bond and Performance Bond shall be in the form and content set forth in the Contract Documents. The failure or refusal of the Prime Contractor to furnish either the Performance Bond or the Labor and Material Payment Bond in strict conformity with this Article 6.9 may be deemed by the District as a default by the Prime Contractor of a material obligation hereunder. Upon request of the Prime Contractor, the District may consider and accept, but is not obligated to do so, multiple sureties on such bonds. The Surety on any bond required under the Contract Documents shall be on the list of sureties

approved by the United States Department of Treasury, as set forth in the Federal Register and/or an Admitted Surety Insurer as that term is defined in California Code of Civil Procedure §995.120.

**ARTICLE 7: CONTRACT TIME**

**7.1. Substantial Completion of the Work within Contract Time.** Unless otherwise expressly provided in the Contract Documents, the Contract Time is the period of time, including authorized adjustments thereto, allotted in the Contract Documents for Substantial Completion of the Work. The date for commencement of the Work is the date established by the Notice to Proceed issued by the District pursuant to the Agreement, which shall not be postponed by the failure to act of the Prime Contractor or of persons or entities for which the Prime Contractor is responsible. The date of Substantial Completion is the date certified by the Consultant and the District's Inspector as such in accordance with the Contract Documents. The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

**7.2. Progress and Completion of the Work.**

**7.2.1. Time of Essence.** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Prime Contractor confirms that the Contract Time is a reasonable period for performing and achieving Substantial Completion of the Work. The Prime Contractor shall employ and supply a sufficient force of workers, material and equipment, and shall prosecute the Work with such diligence so as to maintain progress, to prevent Work stoppage and to achieve Substantial Completion of all of the Work within the Contract Time.

**7.2.2. Substantial Completion.** Substantial Completion is that stage in the progress of the Work when the Work is complete in accordance with the Contract Documents so the District can occupy or use the Work for its intended purpose. Substantial Completion shall be determined by the Consultant and/or the District's Inspector upon request by the Prime Contractor in accordance with the Contract Documents. The good faith and reasonable determination of Substantial Completion by the Consultant and/or District Inspector shall be controlling and final.

**7.2.3. Correction or Completion of the Work after Substantial Completion.**

**7.2.3.1. Items for Correction or Completion.** Upon achieving Substantial Completion of the Work, the District, the District's Inspector, the Project Manager, the Consultant and the Prime Contractor shall jointly inspect the Work and prepare a comprehensive list of items of the Work to be corrected or completed by the Prime Contractor. The exclusion of, or failure to include, any item on such list shall not alter or limit the obligation of the Prime Contractor to complete or correct

any portion of the Work in accordance with the Contract Documents.

**7.2.3.2. Time for Completing Correction or Completion Items.** In addition to setting forth items for correction or completion pursuant to Article 7.2.3.1, the District, Project Manager, Prime Contractor and Consultant shall, after the joint inspection, establish a reasonable time for Prime Contractor's completion of all items requiring correction or completion. In the event that the District, the Prime Contractor and the Consultant are unable to mutually agree upon the time for the Prime Contractor's completion of such items, the Consultant shall determine such time, and in such event, the time determined by the Consultant shall be final and binding upon the District and Prime Contractor so long as the Consultant's determination is made in good faith. The Prime Contractor shall promptly and diligently proceed to complete or correct all items noted on such list within the time established. In the event that the Prime Contractor shall fail or refuse, for any reason, to complete items requiring completion or correction within the time so established, Prime Contractor shall be subject to assessment of Liquidated Damages in accordance with Article 7.5 hereof. The foregoing notwithstanding, in the event of Prime Contractor's failure or refusal to complete all items of the Work requiring correction or completion within the time so established, the District may, in its sole and exclusive discretion and without further notice to Prime Contractor, elect to cease the completion of such items of the Work requiring correction or completion, provided, however, that such election by the District shall be in addition to, and not in lieu of, any other right or remedy of the District under the Contract Documents or at law. In the event that the District shall elect to complete items of the Work requiring correction or completion, pursuant to the foregoing, the Prime Contractor shall be responsible for all costs incurred by the District in connection therewith and the District may deduct such costs from any portion of the Contract Price then or thereafter due the Prime Contractor. In the event the costs incurred by the District to perform the items requiring correction or completion shall exceed the remaining Contract Price due to the Prime Contractor, the Prime Contractor's Performance Bond Surety shall be liable to District for any such excess costs.

**7.2.4. Final Completion.** Final Completion is that stage of the Work when all Work has been completed in accordance with the Contract Documents, including without limitation, the performance of all correction or completion items noted upon Substantial Completion, and the Contract has been otherwise fully performed by the Prime Contractor. Final Completion shall be determined by the Consultant and the District's Inspector upon request of the Prime Contractor. The good faith and reasonable determination of Final Completion by the District's Inspector and the Consultant shall be controlling and final.

- 7.2.5. Prime Contractor Responsibility for Multiple Inspections.** In the event the Prime Contractor shall request determination of Substantial Completion or Final Completion by the District's Inspector and the Consultant and it is determined by the District's Inspector and the Consultant that the Work does not then justify certification of Substantial Completion or Final Completion and re-inspection is required at a subsequent time to make such determination, the Prime Contractor shall be responsible for all costs of such re-inspection, including without limitation, the fees of the Consultant and the salary of the District's Inspector. The District may deduct all such costs from the balance of the Contract Price then due or thereafter due to the Prime Contractor.
- 7.2.6. Final Acceptance.** Final Acceptance of the Work shall occur upon approval of the Work by the District's Board of Trustees; such approval shall be submitted for adoption at the next regularly scheduled meeting of the District's Board of Trustees after the determination of Final Completion. The commencement of any warranty or guarantee period under the Contract Documents shall be deemed to be the date upon which the District's Board of Trustees approves of the Final Acceptance of the Work.
- 7.3. Construction Schedule.**
- 7.3.1. Construction Schedule Terms Defined.**
- 7.3.1.1. Bid Schedule.** The Bid Schedule is the Schedule issued with the Bid Documents, which shall be used by the Prime Contractor and its Subcontractor(s) for preparation of the Prime Contractor's Bid Proposal.
- 7.3.1.2. Preliminary Base Line Construction Schedule.** The Preliminary Base Line Construction Schedule is the schedule created by the Prime Contractor, within seven (7) days after of the Notice to Proceed is issued by or on behalf of the District, for proposing revisions to the Bid Schedule.
- 7.3.1.3. Base Line Construction Schedule.** The Base Line Construction Schedule is developed from the input of each Prime Contractor's Preliminary Base Line Construction Schedule. The Base Line Construction Schedule shall be used for the initial commencement of construction, scheduling, monitoring of the Project on a continual basis until Updated Construction Schedules are issued.
- 7.3.1.4. Updated Construction Schedule.** The Updated Construction Schedules are the Construction Schedules issued after the Base Line Construction Schedule. Additionally, the Updated Construction

Schedule may be used for bidding by any Contractor for work to commence on the Project subsequent to the Base Line Construction Schedule.

**7.3.1.5. Recovery Schedule.** A Recovery Schedule is a Construction Schedule prepared by the Contractor for a Bid Package to illustrate the manner in which such Contractor shall recover lost time due to delays with the progress of the Contractor's Work and the Contractor's ability to meet Milestones and/or Project completion dates/requirements.

**7.3.1.6. Construction Schedule(s).** Construction Schedules collectively refer to the Bid Schedule, Preliminary Base Line Construction Schedule, Base Line Construction Schedule, and Updated Construction Schedule.

**7.3.1.7. Three Week Look Ahead Schedules.** Three Week Look Ahead Schedules shall be issued on a weekly basis at the Project Team Meeting identifying Work in more detail than the activities shown in the Construction Schedules.

**7.3.2. Bid Schedule.** The Bid Schedule is for reference only. Any contractor awarded a contract for any portion of the Project shall comply with the Project Manager's directives regarding the scheduling, sequencing and coordination of the Work. The District expressly reserves the right to modify the Bid Schedule based upon input from the Prime Contractor or other project requirements. The Prime Contractor acknowledges and agrees that modifications to the Bid Schedule after award of the Contract shall not be a basis for adjustment of the Contract Time or the Contract Price.

**7.3.3. Preliminary Base Line Schedule.** Within seven (7) days following issuance of the Notice to Proceed, the Prime Contractor shall prepare and submit to the Project Manager a Contractor's Preliminary Construction Schedule reflecting all of Contractor's proposed revisions and recommendations to the Bid Schedule or, in the alternative, Contractor shall notify the District, in writing, that Contractor has no proposed revisions or recommendations to the Bid Schedule. The Prime Contractor acknowledges and agrees that its proposed modifications to the Bid Schedule are subject to acceptance by the District in the sole and exclusive discretion of the District. The Prime Contractor may submit proposed revisions to the Bid Schedule depicting completion of the Work in a duration shorter than the Contract Time established for the Bid Package; provided that if such proposed modifications to the Bid Schedule are accepted, such acceptance shall not be a basis for adjustment to the Contract Price in the event that completion of the Work shall occur after the time depicted therein, nor shall revisions to the Bid Schedule be the basis for any extension of the Contract Time. If the Prime Contractor does not submit a Contractor's Preliminary Construction Schedule within ten (10) days following the issuance of the Notice to Proceed, Contractor shall be deemed to

have waived its right to submit a Contractor Preliminary Construction Schedule.

- 7.3.4. Baseline Construction Schedule.** Based upon the approved input from the Preliminary Baseline Schedules for the entirety of the Project, the Project Manager will develop and issue a Baseline Construction Schedule. The Baseline Construction Schedule shall control and govern over the sequencing and scheduling noted in the Bid Schedule. The Work shall conform to the Baseline Construction Schedule, including updates and/or revisions thereto. The Baseline Construction Schedule shall be reviewed and updated at Project meeting(s) held periodically during the progress of the Work. If the Work appears to be delayed such that the Work will not comply with required milestone dates, the Bid Package Substantial Completion date and/or the Project Completion date set forth in the Baseline Construction Schedule(s), the Prime Contractor whose activity is on the critical path and/or who has caused the delay(s) shall be liable and assessed Liquidated Damages in accordance with the terms and provisions of the Agreement and these General Conditions.
- 7.3.5. Updated Construction Schedules.** In the event that the progress of the Work or the sequencing of the activities of the Work shall materially differ from that indicated in the Baseline Construction Schedule, the Project Manager may direct the Prime Contractor to propose revisions to update the approved Baseline Construction Schedule. The Prime Contractor shall prepare and submit, within two (2) days, to the Project Manager revised input, in graphic form, to the Baseline Construction Schedule. The Prime Contractor may request consent of the Project Manager to revise the approved Baseline Construction Schedule. Any such request shall be considered by the Project Manager and District only if in writing setting forth the Prime Contractor's proposed revision(s) to the Baseline Construction Schedule and the reason(s) therefore. The Project Manager and District may consent to or deny in its reasonable discretion any such request of the Prime Contractor to revise the Baseline Construction Schedule. Also, the Project Manager may incorporate elements of the Three Week Look Ahead Schedules, as described below, into the Updated Construction Schedule. The Project Manager will incorporate accepted revisions to the Baseline Construction Schedule and issue an Updated Construction Schedule.
- 7.3.6. Recovery Schedules.** The Prime Contractor working on critical path items or whose progress of Work is behind that indicated in the current Updated Construction Schedule shall monitor and update the most recently approved Updated Construction Schedule on a monthly basis, or more frequently as required by the conditions or progress of the Work, or as requested by the Project Manager. The Prime Contractor shall provide the Project Manager with updated Recovery Schedules indicating utilized and projected manpower, progress achieved and activities commenced or completed within the prior Updated Construction Schedule. The Prime Contractor must also provide a written and/or graphic plan to the Project Manager, within forty-eight (48) hours of request, that recovers lost time to achieve the milestone dates and sequencing of

activities established in the most recent Updated Construction Schedule. The Project Manager may direct the sequence in which the various portions of Work within a Bid Package or between Bid Packages shall be performed and may adjust the Construction Schedule(s) at any time the Project Manager considers the completion date to be in jeopardy because of "activities behind schedule." Without adjustment of the Contract Time or the Contract Price, the Prime Contractor shall comply and perform in accordance with revisions to the Construction Schedule(s) issued by the Project Manager hereunder. If requested by the Project Manager, the Prime Contractor shall also submit, with its updates, a narrative statement including a description of current and anticipated problem areas of the Work, delaying factors and their impact, and an explanation of corrective action taken or proposed by the Prime Contractor. The District may, from time to time, and in the District's sole and exclusive discretion, transmit to the Contractor's Performance Bond Surety the Construction Schedule, any updates thereof and the narrative statement described hereinabove. The District's election to transmit, or not to transmit such information, to the Contractor's Performance Bond Surety shall not limit the Contractor's obligations under the Contract Documents.

- 7.3.7. Three (3) Week Look Ahead Schedule.** The Prime Contractor shall prepare report, submit and maintain the Construction Schedule, on a weekly or regular basis, by submitting a Three (3) Week Look Ahead Schedule at Project Meetings. The Three (3) Week Look Ahead Schedule shall provide additional definition of manpower, activities and sequencing to those identified on the Construction Schedule. The form, content and extent of detail in the Contractor prepared Three (3) Week Look Ahead Schedules shall be as required by the Project Manager. The Project Manager shall assimilate each of the various Contractors' Three (3) Week Look Ahead Schedules into an overall Project Three (3) Week Look Ahead Schedule and issue it at the following Project Meeting to utilize as a comparison of progress against the most recent Construction Schedule. Failure of the Prime Contractor to provide a Three (3) Week Look Ahead Schedule may be deemed by the District as the Prime Contractor's default in the performance of a material obligation under Contract Documents.
- 7.3.8. Cost of Scheduling.** Any and all costs or expenses required or incurred to prepare, submit, maintain, and update the Construction, Recovery or Three (3) Week Look Ahead Schedules shall be solely that of the Prime Contractor without adjustment of the Contract Price. The Contract Price shall not be subject to adjustment on account of costs, fees or expenses incurred or associated with the Prime Contractor's preparation, submittal, and maintenance or updating of the Bid Package Construction Schedules. If the Prime Contractor does not comply with this District's request for an updated schedule, the District may have the update completed by others at the Prime Contractor's expense. In such event, the updated Construction Schedule shall be deemed binding upon the Prime Contractor and the District may deduct all costs, fee or expenses in preparing such updated Construction Schedule(s) from any portion of the Contract Price

then or thereafter due the Prime Contractor.

- 7.3.9. Scheduling Software & Requirements.** Unless otherwise provided in the Special Conditions, the Construction Schedules required under this Article 7 shall; (i) be prepared with a commercially available computer software program in a critical path format; (ii) indicate the date(s) for commencement and completion of various portions of the Work of the Bid Package including without limitation, procurement, fabrication and delivery of major items, materials or equipment; (iii) indicate manpower (estimated men per day) and other resources required for completion of each schedule activity; (iv) indicate costs for completion of each schedule activity; (v) identify each Submittal required by the Contract Documents, the date for the Prime Contractor's submission of each Submittal and the date for the return of the reviewed Submittal to the Prime Contractor.
- 7.3.10. Float.** If the Construction Schedules required under this Article 7 incorporate therein any "float" time, such float shall be deemed to jointly belong to and owned by the District and the prime Contractor. As used herein, "float time" shall be deemed to refer to the time between earliest finish date and the latest finish date of each activity shown on the Construction Schedule. If the construction progress is ahead of schedule based on the Construction Schedule(s) and a delay is encountered (even if such delay is a District caused delay), no compensation of any type will be due the Prime Contractor and the District may claim float days equal to the delay until such float days are exhausted and the delay extends the overall project substantial completion date.
- 7.3.11. Contractor Schedule Responsibility.** The Prime Contractor is responsible for prosecuting the Work in accordance with the then most current Updated Construction Schedule. The Prime Contractor shall be liable to the District for all consequences of its delayed completion of the Work or portions thereof, including without limitation, liability for: (a) all costs, expenses or other charges (including direct, indirect, and/or administrative) incurred by Prime Contractor in furnishing such materials, labor, equipment or services necessary to recover and/or maintain progress of the Work in accordance with the then current Construction Schedule and Milestone Schedule; (b) assessment and withholding of Liquidated Damages for delayed Substantial Completion of the Work of the Bid Package or portions of the Work of the Bid Package, as set forth in the Special Conditions; and (c) costs, losses, expenses, damages, claims or other demands asserted by other contractors for other Bid Packages ("Other Contractors") and/or the District's Consultant, Project Manager, Project Inspectors and/or testing and inspection consultants, the progress of which are delayed, interrupted, hindered or otherwise impacted by the Prime Contractor's failure to complete the Work in accordance with the then most current Updated Construction Schedule. The obligation of the Prime Contractor and the Contractor's Performance Bond Surety to defend, indemnify and hold harmless the Indemnified Parties, as set forth in Article 6.8 of the General Conditions, shall be deemed to include requests for equitable adjustment, claims, demands, actions, causes of actions or proceedings



initiated by Other Contractors based in whole or in part on the delays of the Prime Contractor in completing the Work of the Contractor's Bid Package, or portions thereof, in accordance with the then most current Updated Construction Schedule.

- 7.3.12. Additional Requirements.** Refer to Section 01 2000 Schedules and Payments of the Project Manual for additional requirements.

**7.4. Adjustment of Contract Time.** If Substantial Completion is delayed, adjustment, if any, to the Contract Time on account of such delay shall be in accordance with this Article 7.4.

- 7.4.1. Excusable Delays.** If Substantial Completion of the Work is delayed by Excusable Delays, the Contract Time shall be subject to adjustment for such reasonable period of time as determined by the Consultant; Excusable Delays shall not result in any increase in the Contract Price. Excusable Delays refer to unforeseeable and unavoidable casualties or other unforeseen causes beyond the control, and without fault or neglect, of the Prime Contractor, any Subcontractor, Material Supplier or other person directly or indirectly engaged by the Prime Contractor in performance of any portion of the Work. Excusable Delays include unanticipated and unavoidable labor disputes, unusual and unanticipated delays in transportation of equipment, materials or Construction Equipment reasonably necessary for completion and proper execution of the Work, and unanticipated unusually severe weather conditions. Neither the financial resources of the Prime Contractor or any person or entity directly or indirectly engaged by the Prime Contractor in performance of any portion of the Work shall be deemed conditions beyond the control of the Prime Contractor. If an event of Excusable Delay occurs, the Contract Time shall be subject to adjustment hereunder only if the Prime Contractor establishes: (i) full compliance with all applicable provisions of the Contract Documents relative to the method, manner and time for Prime Contractor's notice and request for adjustment of the Contract Time; (ii) that the event(s) forming the basis for Prime Contractor's request to adjust the Contract Time are outside the reasonable control and without any fault or neglect of the Prime Contractor or any person or entity directly or indirectly engaged by Prime Contractor in performance of any portion of the Work; and (iii) that the event(s) forming the basis for Prime Contractor's request to adjust the Contract Time directly and adversely impacted the progress of the Work as indicated in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of the claimed event(s) of Excusable Delay. The foregoing provisions notwithstanding, if the Special Conditions set forth a number of "Rain Days" to be anticipated during performance of the Work, the Contract Time shall not be adjusted for rain related unusually severe weather conditions until and unless the actual number of Rain Days during performance of the Work shall exceed those noted in the Special Conditions and such additional Rain Days shall have directly and adversely impacted the progress of the Work as depicted in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of such

additional Rain Days.

- 7.4.2. Compensable Delays.** If Substantial Completion of the Work is delayed and such delay is caused by the acts or omissions of the District, the Consultant, or separate contractor employed by the District (collectively "Compensable Delays"), upon Prime Contractor's request and notice, in strict conformity with Articles 7 and 9 of these General Conditions, the Contract Time will be adjusted by Change Order for such reasonable period of time as determined by the Consultant and the District. In accordance with California Public Contract Code §7102, if the Prime Contractor's progress is delayed by any of the events described in the preceding sentence, Prime Contractor shall not be precluded from the recovery of damages directly and proximately resulting there from, provided that the District is liable for the delay, the delay is unreasonable under the circumstances involved and the delay was not within the reasonable contemplation of the District and the Prime Contractor at the time of execution of the Agreement. In such event, Prime Contractor's damages, if any, shall be limited to direct, actual and unavoidable additional costs of labor, materials or Construction Equipment directly resulting from such delay, and shall exclude indirect or other consequential damages. Except as expressly provided for herein, Prime Contractor shall not have any other claim, demand or right to adjustment of the Contract Price arising out of delay, interruption, hindrance or disruption to the progress of the Work. Adjustments to the Contract Price and the Contract Time, if any, on account of Changes to the Work or Suspension of the Work shall be governed by the applicable provisions of the Contract Documents, including without limitation, Articles 9 and 14 of these General Conditions.
- 7.4.3. Inexcusable Delays.** Inexcusable Delays refer to any delay to the progress of the Work caused by events or factors other than those specifically identified in Articles 7.4.1 and 7.4.2 above. Neither the Contract Price nor the Contract Time shall be adjusted on account of Inexcusable Delays.
- 7.4.4. Adjustment of Contract Time.**
- 7.4.4.1. Procedure for Adjustment of Contract Time.** The Contract Time shall be subject to adjustment only in strict conformity with applicable provisions of the Contract Documents. Failure of Prime Contractor to request adjustment(s) of the Contract Time in strict conformity with applicable provisions of the Contract Documents shall be deemed Prime Contractor's waiver of the same.
- 7.4.4.2. Limitations upon Adjustment of Contract Time on Account of Delays.** Any adjustment of the Contract Time on account of an Excusable Delay or a Compensable Delay shall be limited as set forth herein. If an Inexcusable Delay and a Compensable Delay occur

concurrently, the maximum extension of the Contract Time shall be the number of days from the commencement of the first delay to the cessation of the delay which ends last. If an Inexcusable Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of days, if any, which the Excusable Delay or the Compensable Delay exceeds the period of time of the Inexcusable Delay. In addition to the foregoing limitations upon extension of the Contract Time, no adjustment of the Contract Time shall be made on account of any Excusable Delays or Compensable Delays unless such delay(s) actually and directly impact Work or Work activities on the critical path of the then current and updated Approved Construction Schedule as of the date on which such delay first occurs. The District shall not be deemed in breach of, or otherwise in default of any obligation hereunder, if the District shall deny any request by the Prime Contractor for an adjustment of the Contract Time for any delay which does not actually and directly impact Work or Work activities on the then current and updated Approved Construction Schedule.

**7.5. Liquidated Damages.** Should the Contractor neglect, fail or refuse to: (i) submit Submittals in accordance with the Approved Construction Schedule or Updated Construction Schedule, as applicable; (ii) achieve Substantial Completion of the Work within the Contract Time, (subject to adjustments authorized under the Contract Documents); (iii) achieve completion of certain phases thereof or milestones as required by the Approved Construction Schedule or (iv) complete Punch list items within the time established pursuant to the Contract Documents, the Contractor agrees to pay to the District the amount of per diem Liquidated Damages set forth in the Special Conditions, not as a penalty but as Liquidated Damages, for every day beyond the Contract Time, as adjusted, until Submittals are submitted, Substantial Completion or completion of the Punch list items are achieved. The Liquidated Damages amounts set forth in the Special Conditions are agreed upon by and between the Contractor and the District because of the difficulty of fixing the District's actual damages in the event of delayed submission of Submittals, Substantial Completion or completion of Punch list items. The Contractor and the District specifically agree that said amounts are reasonable estimates of the District's damages in such event, and that such amounts do not constitute a penalty. Liquidated Damages may be deducted from the Contract Price then or thereafter due the Contractor. The Contractor and the Surety shall each be jointly and severally liable to the District for any Liquidated Damages exceeding any amount of the Contract Price then held or retained by the District, provided that liability of the Surety to the District shall be limited to the penal sum of the Performance Bond. In the event that the Contractor shall fail or refuse to complete Punch list items and the District elects to exercise its right to cause completion or correction of such items pursuant to Article 7.2.3.2 hereof, the District's assessment of Liquidated Damages pursuant to the foregoing shall be in addition to, and not in lieu of, the District's right to charge Contractor with the cost of completing or correcting such items of the Work, as provided for under Article 7.2.3.2. Moreover, the District's assessment of Liquidated Damages shall not limit or reduce damages available to the District for Contractor's delay to other contractors. The Contractor and the District acknowledge and agree that the provisions of this Article 7.5 are reasonable under the circumstances existing at the time of the Contractor's execution of the Agreement.

**7.6. District Right to Take-Over Work.**

- 7.6.1. **Progress of Work.** If the Contractor fails or refuses, for any reason and at any time, to provide sufficient materials, labor, equipment, tools and services to maintain progress of the Work in accordance with the then current Construction Schedule, the District may correct such failure(s), after seventy-two (72) hour advance written notice of same from the District to the Contractor. Upon such notice, District may, in its sole discretion, takeover the Work or any portion thereof and thereafter diligently continue to completion or, in the alternative, supplement Contractor's materials, labor, equipment, tools and services to maintain progress of the Work in accordance with the then current Construction Schedule.
  
- 7.6.2. **District's Right to Withhold.** All costs, expenses or other charges incurred by the District in connection with completing or supplementing the Work under this Article 7.6 shall be at the sole cost of the Contractor. District shall be entitled to deduct from the Contract Price then or thereafter due Contractor, all such costs, expenses, and charges, including costs for any additional services the District's representatives and consultants made necessary thereby. If the Contract Price then or thereafter due the Contractor is insufficient to cover such amounts, Contractor shall pay the additional sum to the District promptly upon demand therefor. The assessment and/or withholding of the amount of such costs, expenses, and/or other charges shall be in addition to, and not in lieu of, any liquidated damages assessed and/or withheld from Contractor under Article 7.5 hereof.
  
- 7.6.3. **Non-Exclusive Remedy.** The District's exercise of rights pursuant to the foregoing shall not be deemed a waiver or limitation of any other right or remedy of the District under the Contract Documents or the Laws.

**ARTICLE 8: CONTRACT PRICE**

**8.1. Contract Price.** The Contract Price is the amount stated in the Agreement as such, and subject to any authorized adjustments thereto in accordance with the Contract Documents, is the total amount payable by the District to the Prime Contractor for performance of the Work under the Contract Documents. The District's payment of the Contract Price to the Prime Contractor shall be in accordance with the Contract Documents. In addition to the conditions precedent set forth in Article 8.3.4.1 to the Contractor's right to receive a Progress Payment and the District's obligation to disburse a Progress Payment, additional conditions precedent to the Contractor's right to receive Progress Payments and the District's obligation to disburse Progress Payments shall be: (i) the Contractor's completion, execution and filing of DSA Form 102; and (ii) the Contractor's completion and execution of the Internal Revenue Service W -9 form, in strict conformity with the Internal Revenue Service rules and regulations relating thereto, along with submittal of the completed, executed form of W-9 to the District.

**8.2. Cost Breakdown; Cash Flow Projections.** Within fifteen (15) days of the execution of the Agreement by Prime Contractor, Prime Contractor shall furnish, on forms provided or approved by the District, a detailed estimate and complete Cost Breakdown of the entire Contract Price. The Cost Breakdown shall be subject to the District's review and approval of the form and content thereof; in addition to other requirements relating to the Cost Breakdown, the items included therein shall be organized consistent with the CSI format, shall correlate with activities described in the Construction Schedule, and shall include separate items and costs for: mobilization, bond premiums, general conditions and Prime Contractor's fee. In the event that the District shall reasonably object to any portion of the Cost Breakdown, within ten (10) days of the District's receipt of the Cost Breakdown, the District shall notify the Prime Contractor, in writing of the District's objection(s) to the Cost Breakdown. Within five (5) days of the date of the District's written objection(s), Prime Contractor shall submit a revised Cost Breakdown to the District for review and approval. The foregoing procedure for the preparation, review and approval of the Cost Breakdown shall continue until the District has approved of the entirety of the Cost Breakdown. Once the Cost Breakdown is approved by the District, the Cost Breakdown shall not be thereafter modified or amended by the Prime Contractor without the prior consent and approval of the District, which may be granted or withheld in the sole reasonable discretion of the District. Notwithstanding any provision of the Contract Documents to the contrary, payment of the Prime Contractor's overhead, supervision and general conditions costs and profit, as such items are reflected in the Cost Breakdown, shall be made by the District in equal installments with its disbursements of Progress Payments and the Final Payment with the amount of each such installment equal to the aggregate amount of such items as reflected in the Cost Breakdown divided by the number of months of the Contract Time. Upon request of the District, the Prime Contractor shall provide reasonably satisfactory evidence to substantiate the cost of any item included in the Cost Breakdown. Concurrently with submittal of its Cost Breakdown, the Prime Contractor shall submit for review and approval a Cash Flow Projection on a monthly basis over the Contract Time duration for the entire Contract Price. The Cash Flow Projection shall be revised to take into account-authorized adjustments of the Contract Time or the Contract Price.

### **8.3. Progress Payments.**

**8.3.1. Applications for Progress Payments.** During the Prime Contractor's performance of the Work, the Prime Contractor shall submit monthly, on the first working day of each month, to the Project Manager and the Consultant, Applications for Progress Payments, on forms approved by the District, setting forth an itemized estimate of Work completed in the preceding month for the purpose of the District's making of Progress Payments thereon. Values utilized in the Applications for Progress Payments shall be based upon the District approved Cost Breakdown pursuant to Article 8.2 above and such values shall be only for determining the basis of Progress Payments to Prime Contractor, and shall not be considered as fixing a basis for adjustments, whether additive or deductive, to the Contract Price, or for determining the extent of Work actually completed.

**8.3.2. District's Review of Applications for Progress Payments.** In accordance with Public Contract Code §20104.50, upon receipt of an Application for Progress

Payment, the District shall cause the same to be reviewed by the District's Inspector, the Project Manager, if one is designated by the District, and the Consultant, as soon as is practicable after receipt of such Application for Progress Payment. Such review shall be for the purpose of determining that the Application for Progress Payment is a proper Progress Payment request. For purposes of this Article 8.3.2, an Application for Progress Payment shall be deemed "proper" only if it is submitted on the form approved by the District, with all of the requested information of such form of Application for Progress Payment completely and accurately provided by the Prime Contractor and such completed Application for Progress Payment is accompanied by: (i) Certified Payrolls of the Prime Contractor and all Subcontractors, of any tier, for laborers performing any portion of the Work for which a Progress Payment is requested; (ii) duly completed and executed forms of Conditional Waiver and Release of Rights Upon Progress Payment in accordance with California Civil Code §3262 of the Prime Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment requested; (iii) duly completed and executed forms of Unconditional Waiver and Release of Rights upon Progress Payment in accordance with California Civil Code §3262 of the Prime Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment received by the Prime Contractor under the prior Application for Progress Payment; (iv) if applicable, a current union statement reflecting that the Prime Contractor and any Subcontractor of any tier, are current in the payment of any supplemental fringe benefits required pursuant to any collective bargaining agreement to which the Prime Contractor or any such Subcontractor is a party to or is otherwise bound by; and (v) a certification by the Prime Contractor that it has continuously maintained, or caused to be maintained, the Record Drawings reflecting the actual as-built conditions of the Work performed be for which the Progress Payment is requested, it being understood that such certification is subject to verification by the District, Consultant or the Project Manager prior to disbursement of the Progress Payment. In accordance with Public Contract Code §20104.50, an Application for Progress Payment determined by the District not to be a proper Application for Progress Payment shall be returned by the District to the Prime Contractor as soon as is practicable after receipt of the same from the Prime Contractor, but in no event not more than seven (7) days after the District's receipt thereof. The District's return of any Application for Progress Payment pursuant to the preceding sentence shall be accompanied by a written document setting forth the reason(s) why the Application for Progress Payment is not proper.

- 8.3.3. Consultant's, Project Manager's, and District's Inspector Review of Applications for Progress Payments.** Upon receipt of an Application for Progress Payment, the Consultant, Project Manager, and the District's Inspector shall inspect and verify the Work to determine whether it has been performed in accordance with the terms of the Contract Documents and to determine the portion of the Application for Progress Payment which is properly due to the Prime Contractor under the terms of the Contract Documents.

#### 8.3.4. District's Disbursement of Progress Payments.

**8.3.4.1. Timely Disbursement of Progress Payments.** In accordance with Public Contract Code §20104.50, within thirty (30) days after the District's receipt of a proper Application for Progress Payment, there shall be paid, by District, to Prime Contractor a sum equal to ninety percent (90%) of the value of the Work indicated in the Application for Progress Payment which is actually in place as of the date of the Application for Progress Payment and as verified and approved by the District's Inspector and the Consultant and the pro rata portion of the Prime Contractor's overhead, supervision and general conditions costs and profit for that month; provided, however, that the District's obligation to disburse any Progress Payment shall be subject to the District's receipt of all documents set forth in Article 8.3.2 above, each and all of which are conditions precedent to the District's obligation to disburse Progress Payments. If an Application for Progress Payment is determined not to be proper due to the failure or refusal of the Prime Contractor to submit documents with the Application for Progress Payment, as required by Article 8.3.2, or incompleteness or inaccuracies in any such documents submitted or if it is reasonably determined that the Record Drawings have not been continuously maintained to reflect the actual as built conditions of the Work completed in the period for which the Progress Payment is requested, the thirty (30) day period hereunder for the District's timely disbursement of a Progress Payment shall be deemed to commence on the date that the District is actually in receipt of documents not submitted with the Application for Progress Payment, or corrections to documents with the Application for Progress Payment so as to render them complete and accurate, or the date upon which the Prime Contractor accurately and fully completes preparation of the Record Drawings relating to the Work for which the Progress Payment is requested.

**8.3.4.2. Untimely Disbursement of Progress Payments.** In accordance with Public Contract Code §20104.50, in the event that the District shall fail to make any Progress Payment within thirty (30) days after receipt of an undisputed and properly submitted Application for Progress Payment, the District shall pay the Prime Contractor interest on the undisputed amount of such Application for Progress Payment equal to the legal rate of interest set forth in California Code of Civil Procedure §685.010(a). The foregoing notwithstanding, in the event that the District shall determine that any Application for Progress Payment is not proper, pursuant to Article 8.3.2 above, and the District does not return such Application for Progress Payment within the seven (7) day period provided for in Article 8.3.2, the period of time

for the District's disbursement of the Progress Payment on such Application for Progress Payment without incurring the interest liability shall be reduced by the number of days exceeding the seven (7) day return period.

**8.3.4.3. District's Right to Disburse Progress Payments by Joint Checks.** Provided that the District is in receipt of the applicable Subcontract or Purchase Order, the District, may in its sole discretion, issue joint checks to the Prime Contractor and such Subcontractor or Material Supplier in satisfaction of its obligation to make Progress Payments or the Final Payment due hereunder.

**8.3.4.4. No Waiver of Defective or Non-Conforming Work.** The approval of any Application for Progress Payment or the disbursement of any Progress Payment to the Prime Contractor shall not be deemed nor constitute acceptance of defective Work or Work not in conformity with the Contract Documents.

**8.3.5. Progress Payments for Changed Work.** The Prime Contractor's Applications for Progress Payment may include requests for payment on account of Changes in the Work which have been properly authorized and approved by the District's Inspector, the Consultant and all other governmental agencies with jurisdiction over such Change in accordance with the terms of the Contract Documents and for which a Change Order has been issued. Except as provided for herein, no other payment shall be made by the District for Changes in the Work.

**8.3.6. Materials or Equipment Not Incorporated Into the Work.**

**8.3.6.1. Limitations upon Payment.** Except as expressly provided for herein, no payments shall be made by the District on account of any item of the Work, including without limitation, materials or equipment which, at the time of the Prime Contractor's submittal of an Application for Progress Payment, has/have not been incorporated into and made a part of the Work.

**8.3.6.2. Materials or Equipment Delivered and Stored at the Site.** The District may, in its sole and exclusive discretion, make payment for materials or equipment not yet incorporated into the Work if, at or prior to the time of the Prime Contractor's submittal of a an Application for Progress Payment incorporating therein a request for payment of such materials or equipment if all of the following are complied with: (a) the materials or equipment have been delivered to the Site; (b) adequate arrangements, reasonably satisfactory to the District, have been made by the Prime Contractor to store and protect such materials or equipment at the Site including without limitation,



insurance reasonably satisfactory to the District, covering and protecting against the risk of loss, destruction, theft or other damage to such materials or equipment while in storage; and (c) the establishment of procedures reasonably satisfactory to the District by which title to such materials or equipment will be vested in the District upon the District's payment therefore. The Prime Contractor acknowledges that the discretion to make, or not to make, payment for materials or equipment delivered or stored at the site of the Work pursuant to the preceding sentence shall be exercised exclusively by the District; the District's exercise of discretion not to make payment for materials or equipment delivered or stored at the Site, but not yet incorporated into the Work shall not be deemed the District's default hereunder. In the event that the District shall elect to make payment for materials or equipment delivered and stored at the Site, the costs and expenses incurred to comply with the requirements of (b) and (c) of this Article 8.3.6.2 shall be borne solely and exclusively by the Prime Contractor and no payment shall be made by the District on account of such costs and expenses.

- 8.3.6.3. Materials or Equipment Not Delivered or Stored at the Site.** No payments shall be made by the District for materials or equipment to be incorporated into the Work where such materials or equipment have not been delivered or stored at the Site. The foregoing notwithstanding, the District may, in its sole and exclusive discretion, elect to make payment for materials or equipment not incorporated into the Work and which are not delivered or stored at the Site at or prior to the time of the Prime Contractor's submittal of an Application for Progress Payment incorporating therein a request for payment of such materials or equipment provided that each and all of the following have been complied with: (a) adequate arrangements, reasonably satisfactory to the District, have been made by the Prime Contractor to store and protect such materials or equipment at a bonded warehouse, and which arrangements shall include without limitation, insurance reasonably satisfactory to the District, covering and protecting against the risk of loss, destruction, theft or other damage to such materials or equipment while in storage; and (b) the establishment of procedures reasonably satisfactory to the District by which title to such materials or equipment will be vested in the District upon the District's payment therefore. The Prime Contractor acknowledges that the discretion to make, or not to make, payment for such materials or equipment delivered or stored at a bonded warehouse pursuant to the preceding sentence shall be exercised exclusively by the District; the District's exercise of discretion not to make payment for such materials or equipment shall not be deemed the District's default hereunder. In the event that the District shall elect to make payment for materials or equipment delivered and stored at

a bonded warehouse, the costs and expenses incurred to comply with the requirements of (a) and (b) of this Article 8.3.6.3 shall be borne solely and exclusively by the Prime Contractor and no payment shall be made by the District on account of such costs and expenses.

**8.3.6.4. Materials or Equipment in Fabrication or Transit.** The provisions of this Article 8.3.6 notwithstanding, the District shall not make any payment on account of any materials or equipment which is in the process of being fabricated or which are in transit to the Site of or other storage location.

**8.3.7. Exclusions from Progress Payments.** In addition to the District's right to withhold disbursement of any Progress Payment provided for in the Contract Documents, neither the Prime Contractor's Application for Progress Payment shall include, nor shall the District be obligated to disburse any portion of the Contract Price for amounts which the Prime Contractor does not intend to pay any Subcontractor, of any tier, or Material Supplier because of a dispute or any other reason.

**8.3.8. Title to Work.** The Prime Contractor warrants that title to all Work covered by an Application for Progress Payment will pass to the District no later than the time of payment. The Prime Contractor further warrants that upon submittal of an Application for Progress Payment, all Work for which a Progress Payment has been previously issued and the Prime Contractor has received payment from the District therefore shall, to the best of the Prime Contractor's knowledge, information and belief, be free and clear of liens, claims, stop notices, security interests or encumbrances in favor of the Prime Contractor, Subcontractors, Material Suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

**8.3.9. Substitute Security for Retention.** In accordance with the provisions of California Public Contract Code §22300, eligible and equivalent securities may be substituted for any monies withheld by the District to ensure the Prime Contractor's performance under the Contract Documents at the request and expense of the Prime Contractor and in conformity with the provisions of California Public Contract Code §22300. The foregoing and the provisions of California Public Contract Code §22300 notwithstanding, failure of the Prime Contractor to request the substitution of eligible and equivalent securities for monies to be withheld by the District prior to submission of the first Application for Progress Payment shall be deemed a waiver of such right.

**8.4. Final Payment.**

**8.4.1. Application for Final Payment.** When the Prime Contractor has achieved Final Completion and Acceptance of the entire Work and has otherwise fully

performed its obligations under the Contract Documents, the Prime Contractor shall submit an Application for Final Payment on such form as approved by the District. Thereupon, the Consultant and the District's Inspector will promptly make a final inspection of the Work and when the Consultant and the District's Inspector find the Work acceptable under the Contract Documents and that the Contract has been fully performed by the Prime Contractor, the Consultant and the District's Inspector will thereupon promptly approve the Application for Final Payment, stating that to the best their knowledge, information and belief, the Work on the entire Project has been fully completed in accordance with the terms of the Contract Documents. The Final Payment shall include the remaining balance of the Contract Price and any retention from Progress Payments previously withheld by the District.

**8.4.2. Conditions Precedent to Disbursement of Final Payment.** Neither Final Payment nor any remaining Contract Price shall become due until the Prime Contractor submits to the District each and all of the following, the submittal of which are conditions precedent to the District's obligation to disburse the Final Payment: (i) an affidavit or certification by the Prime Contractor that payrolls, bills for materials and other indebtedness incurred in connection with the Work for which the District or the District's property may or might be responsible or encumbered have been paid or otherwise satisfied; (ii) a certificate evidencing that insurance required by the Contract Documents to remain in force after the Prime Contractor's receipt of Final Payment is currently in effect; (iii) a written statement that the Prime Contractor knows of no substantial reason that the insurance will not be renewable to cover any period following Final Payment as required by the Contract Documents; (iv) consent of the Surety on the Labor and Material Payment Bond and Performance Bond, to Final Payment if required; (v) duly completed and executed forms of Conditional or Unconditional Waivers and Releases of rights upon Final Payment of the Prime Contractor, Subcontractors of any tier and Material Suppliers in accordance with California Civil Code §3262, with each of the same stating that there are, or will be, no claims for additional compensation after disbursement of the Final Payment; (vi) Operations and Maintenance manuals and separate warranties provided by any manufacturer or distributor of any materials or equipment incorporated into the Work; (vii) the Record Drawings; (viii) the form of Guarantee included in the Contract Documents duly executed by an authorized representative of the Prime Contractor; (ix) all other items or documents required by the Contract Documents to be delivered to the District upon completion of the Work; (x) if required by the District, such other data establishing payment or satisfaction of obligations such as receipts, releases and waivers of liens, stop notices, claims, security interest or encumbrances arising out of the Contract to the extent and in such form as may be required by the District; and (xi) the Contractor's completion and filing of DSA Form 6.

**8.4.3. Disbursement of Final Payment.** Provided that the District is then in receipt of all documents and other items in Article 8.4.2 above as conditions precedent to

the District's obligation to disburse Final Payment, not later than sixty (60) days following Final Acceptance the District shall disburse the Final Payment to the Prime Contractor. Pursuant to California Public Contract Code §7107, if there is any dispute between the District and the Prime Contractor at the time that disbursement of the Final Payment is due, the District may withhold from disbursement of the Final Payment an amount not to exceed one hundred fifty percent (150%) of the amount in dispute.

**8.4.4. Waiver of Claims.** The Prime Contractor's acceptance of the Final Payment shall be deemed a waiver and release by the Prime Contractor of any and all claims against the District for compensation or otherwise in connection with the Prime Contractor's performance of the Contract.

**8.4.5. Claims Asserted After Final Payment.** Any lien, stop notice or other claim filed or asserted after the Prime Contractor's acceptance of the Final Payment by any Subcontractor, of any tier, laborer, Material Supplier or others in connection with or for Work performed under the Contract Documents shall be the sole and exclusive responsibility of the Prime Contractor who further agrees to indemnify, defend and hold harmless the District and its officers, agents, representatives and employees from and against any claims, demands or judgments arising or associated therewith, including without limitation attorney's fees incurred by the District in connection therewith. In the event any lien, stop notice or other claim of any Subcontractor, Laborer, Material Supplier or others performing Work under the Contract Documents remain unsatisfied after Final Payment is made, Prime Contractor shall refund to District all monies that the District may pay or be compelled to pay in discharging any lien, stop notice or other claim, including, without limitation all costs and reasonable attorney's fees incurred by District in connection therewith.

**8.5. Withholding of Payments.** The District may withhold any Progress Payment or the Final Payment, in whole or in part, or back charge the Prime Contractor to the extent it may deem advisable to protect the District on account of: (i) defective Work or Work not in conformity with the requirements of the Contract Documents which is not remedied; (ii) failure of the Prime Contractor to make payments when due Subcontractors or Material Suppliers for materials or labor; (iii) claims filed or reasonable evidence of the probable filing of claims by Subcontractors, laborers, Material Suppliers, or others performing any portion of the Work under the Contract Documents for which the District may be liable or responsible including, without limitation, Stop Notice Claims filed with the District pursuant to California Civil Code §3179 et. seq.; (iv) a reasonable doubt that the Contract can be completed for the then unpaid balance of the Contract Price; (v) tax demands filed in accordance with California Government Code §12419.4; (vi) other claims, penalties and/or forfeitures for which the District is required or authorized to retain funds otherwise due the Prime Contractor; (vii) any amounts due from the Prime Contractor to the District under the terms of the Contract Documents; or (viii) the Prime Contractor's failure to perform any of its obligations under the Contract Documents or its default under the Contract Documents or its failure to maintain adequate progress of the Work. In addition to the foregoing, the District shall not be obligated to process any Application for Progress Payment or Final Payment, nor shall Prime Contractor be

entitled to any Progress Payment or Final Payment so long as any lawful or proper direction concerning the Work or the performance thereof or any portion thereof, given by the District, the District's Inspector, the Consultant or any public authority having jurisdiction over the Work, or any portion thereof, shall not be fully and completely complied with by the Prime Contractor. When the District is reasonably satisfied that the Prime Contractor has remedied any such deficiency, payment shall be made of the amount withheld.

**8.6. Payments to Subcontractors.** The Prime Contractor shall pay all Subcontractors for and on account of Work of the Contract performed by such Subcontractors in accordance with the terms of their respective subcontracts and as provided for pursuant to California Public Contract Code §10262, the provisions of which are deemed incorporated herein by this reference. In the event of the Prime Contractor's failure to make payment to Subcontractors in conformity with California Public Contract Code §10262, the provisions of California Public Contract Code §10253 shall apply; by this reference, the provisions of California Public Contract Code §10253 are incorporated herein in its entirety, except that the references in said Section 10253 to "the director" shall be deemed to refer to the District.

## **ARTICLE 9: CHANGES**

**9.1. Changes in the Work.** The District, at any time, by written order, may make Changes within the general scope of the Work under the Contract Documents or issue additional instructions; require additional Work or direct deletion of Work. The Prime Contractor shall not proceed with any Change involving an increase or decrease in the Contract Price or the Contract Time without prior written authorization from the District. The foregoing notwithstanding, the Prime Contractor shall promptly commence and diligently complete any Change to the Work subject to the District's written authorization issued pursuant to the preceding sentence; the Prime Contractor shall not be relieved or excused from its prompt commencement and diligent completion of any Change subject to the District's written authorization by virtue of the absence or inability of the Prime Contractor and the District to agree upon the extent of any adjustment to the Contract Time or the Contract Price on account of such Change. The issuance of a Change Order pursuant to this Article 9 in connection with any Change authorized by the District under this Article 9.1 shall not be deemed a condition precedent to Prime Contractor's obligation to promptly commence and diligently complete any such Change authorized by the District hereunder. The District's right to make Changes shall not invalidate the Contract nor relieve the Prime Contractor of any liability or other obligations under the Contract Documents. Any requirement of notice of Changes in the scope of Work to the Surety shall be the responsibility of the Prime Contractor. Changes to the Work depicted or described in the Drawings or the Specifications shall be subject to approval by the DSA. The District may make Changes to bring the Work or the Project into compliance with environmental requirements or standards established by state or federal statutes and regulations enacted after award of the Contract.

**9.2. Oral Order of Change in the Work.** Any oral order, direction, instruction, interpretation, or determination from the District, the District's Inspector or the Consultant which in the opinion of the Prime Contractor causes any change to the scope of the Work, or otherwise requires an adjustment to the Contract Price or the Contract Time, shall be treated as a Change only if the Prime

Contractor gives the Consultant and the District's Inspector written notice within ten (10) days of the order, directions, instructions, interpretation or determination and prior to acting in accordance therewith. Time is of the essence in Prime Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to address the order, direction, instruction, interpretation or determination-giving rise to Prime Contractor's notice. Accordingly, Prime Contractor acknowledges that its failure, for any reason, to give written notice within ten (10) days of such order, direction, instruction, interpretation or determination shall be deemed Prime Contractor's waiver of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of such order, direction, instruction, interpretation or determination. The written notice shall state the date, circumstances, extent of adjustment to the Contract Price or the Contract Time, if any, requested, and the source of the order, directions, instructions, interpretation or determination that the Prime Contractor regards as a Change. Unless the Prime Contractor acts in strict accordance with this procedure, any such order, direction, instruction, interpretation or determination shall not be treated as a Change and the Prime Contractor hereby waives any claim for any adjustment to the Contract Price or the Contract Time on account thereof.

**9.3. Prime Contractor Submittal of Data.** Within thirty (30) days after receipt of a written order directing a Change in the Work or furnishing the written notice regarding any oral order directing a Change in the Work, the Prime Contractor shall submit to the Consultant, the District's Inspector and the District a detailed written statement setting forth the general nature of the Change, the amount of any adjustment to the Contract Price on account thereof, properly itemized and supported by sufficient substantiating data to permit evaluation of the same, and the extent of adjustment of the Contract Time, if any, required by such Change. No claim or adjustment to the Contract Price or the Contract Time shall be allowed if not asserted by the Prime Contractor in strict conformity herewith or if asserted after Final Payment is made under the Contract Documents.

**9.4. Adjustment to Contract Price and Contract Time on Account of Changes to the Work.**

**9.4.1. Adjustment to Contract Price.** Adjustments to the Contract Price due to Changes in the Work shall be determined by application of one of the following methods, in the following order of priority:

**9.4.1.1. Mutual Agreement.** By negotiation and mutual agreement, on a lump sum basis, between the District and the Prime Contractor on the basis of the estimate of the actual and direct increase or decrease in costs on account of the Change. Upon request of the District or the Consultant, the Prime Contractor shall provide a detailed estimate of increase or decrease in costs directly associated with performance of the Change along with cost breakdowns of the components of the Change and supporting data and documentation. The Prime Contractor's estimate of increase or decrease in costs pursuant to the foregoing, if requested, shall be in sufficient detail and in such form as to allow the District, the District's Inspector and the Consultant to review and assess the completeness and accuracy thereof. The Prime Contractor shall be solely responsible for any additional costs or additional time arising out of, or related in any manner to, its failure

to provide the estimate of costs within the time specified in the request of the District or the Consultant for such estimate.

**9.4.1.2. Application of Saylor Current Construction Costs.** By application of the most recent edition of Saylor Current Construction Costs in effect at the time of Prime Contractor's performance of the Change in the Work for the locality of the Site. The Saylor Current Construction Costs shall be applied only to the extent that the Change in the Work is an item of costs specifically set forth in Saylor Construction Costs. In the event that Saylor Current Construction Costs shall cease publication, upon mutual agreement between the District and the Prime Contractor, for purposes of this Article 9.4.1.2, an alternate standardized estimating manual may be utilized in lieu of Saylor Construction Costs, if no mutual agreement is reached between the District and the Prime Contractor regarding the utilization of an alternate estimating manual, adjustments to the Contract Price on account of Changes in the Work shall be determined by application of the methods set forth in Articles 9.4.1.1 or 9.4.1.3 hereof.

**9.4.1.3. Determination by the District.** By the District, whether or not negotiations are initiated pursuant to Article 9.4.1.1 above based upon actual and necessary costs incurred by the Prime Contractor as determined by the District on the basis of the Prime Contractor's records. In the event that the procedure set forth in this Article 9.4.1.3 is utilized to determine the extent of adjustment to the Contract Price on account of Changes to the Work, promptly upon determining the extent of adjustment to the Contract Price, the District shall notify the Prime Contractor in writing of the same; the Prime Contractor shall be deemed to have accepted the District's determination of the amount of adjustment to the Contract Price on account of a Change to the Work unless Prime Contractor shall notify the District, the Consultant and the District's Inspector, in writing, not more than fifteen (15) days from the date of the District's written notice, of any objection to the District's determination. Failure of the Prime Contractor to timely notify the District, the Consultant and the District's Inspector of Prime Contractor's objections to the District's determination of the extent of adjustment to the Contract Price shall be deemed Prime Contractor's acceptance of the District's determination and a waiver of any right or basis of the Prime Contractor to thereafter protest or otherwise object to the District's determination. Notwithstanding any objection of the Prime Contractor to the District's determination of the extent of any adjustment to the Contract Price pursuant to this Article 9.4.1.3, Prime Contractor shall, pursuant to Article 9.7 below, diligently proceed to perform and complete any such Change.

**9.4.1.4. Basis for Adjustment of Contract Price.** In the event of Changes in the Work resulting in an adjustment of the Contract Price and the adjustment of the Contract Price is based upon the methods set forth in Articles 9.4.1.1 or 9.4.1.3 above, the basis for adjustment of the Contract Price shall be as follows:

**9.4.1.4.1. Labor.** Prime Contractor shall be compensated for the costs of labor actually and directly utilized in the performance of the Change. Such labor costs shall be limited to field labor for which there is a prevailing wage rate classification. Wage rates for labor shall not exceed the prevailing wage rates in the locality of the Site and shall be in the labor classification(s) necessary for the performance of the Change. Use of a labor classification, which would increase labor costs associated with any Change, shall not be permitted. Labor costs shall exclude costs incurred by the Prime Contractor in preparing estimate(s) of the costs of the Change, in the maintenance of records relating to the costs of the Change, coordination and assembly of materials and information relating to the Change or performance thereof, or the supervision and other overhead and general conditions costs associated with the Change or performance thereof.

**9.4.1.4.2. Materials and Equipment.** Prime Contractor shall be compensated for the costs of materials and equipment necessarily and actually used or consumed in connection with the performance of Changes. Costs of materials and equipment may include reasonable costs of transportation from a source closest to the site of the Work and delivery to the Site. If discounts by Material Suppliers are available for materials necessarily used in the performance of Changes, they shall be credited to the District. If materials and/or equipment necessarily used in the performance of Changes are obtained from a supplier or source owned in whole or in part by the Prime Contractor, compensation therefore shall not exceed the current wholesale price for such materials or equipment. If, in the reasonable opinion of the District, the costs asserted by the Prime Contractor for materials and/or equipment in connection with any Change is excessive, or if the Prime Contractor fails to provide satisfactory evidence of the actual costs of such materials and/or equipment from its supplier or vendor of the same, the costs of such materials and/or equipment and



the District's obligation for payment of the same shall be limited to the then lowest wholesale price at which similar materials and/or equipment are available in the quantities required to perform the Change. The District reserves the right to furnish materials and/or equipment required for the performance of Changes to the Work, in which event the Prime Contractor shall not be compensated for the costs of furnishing such materials and/or equipment or any mark-up thereon.

**9.4.1.4.3. Construction Equipment.** Prime Contractor shall be compensated for the actual cost of the necessary and direct use of Construction Equipment in the performance of Changes to the Work. Use of such Construction Equipment in the performance of Changes to the Work shall be compensated in increments of fifteen (15) minutes. Rental time for Construction Equipment moved by its own power shall include time required to move such Construction Equipment to the site of the Work from the nearest available rental source of the same. If Construction Equipment is not moved to the Site by its own power, Prime Contractor will be compensated for the loading and transportation costs in lieu of rental time. The foregoing notwithstanding, neither moving time or loading and transportation time shall be allowed if the Construction Equipment is used for performance of any portion of the Work other than Changes to the Work. Unless prior approval in writing is obtained by the Prime Contractor from the Consultant, the District's Inspector and the District, no costs or compensation shall be allowed for time while Construction Equipment is inoperative, idle or on standby, for any reason. The Prime Contractor shall not be entitled to an allowance or any other compensation for Construction Equipment or tools used in the performance of Changes to the Work where such Construction Equipment or tools have a replacement value of \$500.00 or less. Construction Equipment costs claimed by the Prime Contractor in connection with the performance of any Change to the Work shall not exceed rental rates established by distributors or construction equipment rental agencies in the locality of the Site; any costs asserted which exceed such rental rates shall not be allowed or paid. Unless otherwise specifically approved in writing by the Consultant, the District's Inspector and the District, the allowable rate for the use of Construction

Equipment in connection with Changes to the Work shall constitute full compensation to the Prime Contractor for the cost of rental, fuel, power, oil, lubrication, supplies, necessary attachments, repairs or maintenance of any kind, depreciation, storage, insurance, labor (exclusive of labor costs of the Construction Equipment operator), and any all other costs incurred by the Prime Contractor incidental to the use of such Construction Equipment.

**9.4.1.4.4. Mark-up on Costs of Changes to the Work.** In determining the cost to the District and the extent of increase to the Contract Price resulting from a Change adding to the Work, the allowance or mark-ups on the costs of the Change for all overhead (including home office and field overhead), general conditions costs and profit associated with the Change shall not exceed the percentage set forth in the Special Conditions, regardless of the number of Subcontractors, of any tier, performing any portion of any Change to the Work. The foregoing notwithstanding, in the event that the Saylor Current Construction Costs, or a mutually agreed to estimating manual in the event that Saylor Current Construction Costs shall cease publication, is utilized to determine the costs of a Change and the cost computation therein includes an allowance for overhead, general conditions costs and/or profit, the Prime Contractor and any Subcontractor, of any tier, performing any portion of such Change, shall not be entitled to an allowance for overhead general conditions costs and/or profit beyond that reflected for such item of Change in the Saylor Current Construction Costs or other mutually agreed upon estimating manual. In the event of a Change to the Work resulting in a reduction of the Contract Price, no profit, general conditions or overhead costs shall be paid by the District to the Prime Contractor for the reduced or deleted Work. In such event, the adjustment to the Contract Price shall be the actual cost reduction realized by the reduced or deleted Work multiplied by the percentage set forth in the Special Conditions for mark-ups on the cost of a Change adding to the scope of the Work.

**9.4.1.5. Prime Contractor Maintenance of Records.** In the event that Prime Contractor shall be directed to perform any Changes to the Work pursuant to Article 9.1 or 9.2, or should the Prime Contractor encounter conditions which the Prime Contractor, pursuant to Article

9.6, believes would obligate the District to adjust the Contract Price and/or the Contract Time, Prime Contractor shall maintain detailed records on a daily basis. Such records shall include without limitation hourly records for labor and Construction Equipment, purchase orders, invoices and bills of lading for all materials and equipment, rental agreements for Construction Equipment, together with itemized records of materials, equipment and Construction Equipment used that day in connection with the performance of any Change to the Work. In the event that more than one Change to the Work is performed by the Prime Contractor in a calendar day, Prime Contractor shall maintain separate records of labor, Construction Equipment, materials and equipment for each such Change. In the event that any Subcontractor, of any tier, shall provide or perform any portion of any Change to the Work, Prime Contractor shall require that each such Subcontractor maintain records in accordance with this Article 9.4.1.5. Each daily record maintained hereunder shall be signed by Prime Contractor's Superintendent or Prime Contractor's authorized representative; such signature shall be deemed Prime Contractor's representation and warranty that all information contained therein is true, accurate, and complete and relate only to the Change referenced therein. All records maintained by a Subcontractor, of any tier, relating to the costs of a Change to the Work shall be signed by such Subcontractor's authorized representative or Superintendent. All records maintained hereunder shall be subject to inspection, review and/or reproduction by the District, the Consultant or the District's Inspector upon request. In the event that Prime Contractor shall fail or refuse, for any reason, to maintain or make available for inspection, review and/or reproduction such records and the adjustment to the Contract Price on account of any Change to the Work is determined pursuant to Article 9.4.1.5, the District's reasonable good faith determination of the extent of adjustment to the Contract Price on account of such Change shall be final, conclusive, dispositive and binding upon Prime Contractor. Prime Contractor's obligation to maintain records under this Article 9.4.1.5 is in addition to, and not in lieu of, any other Prime Contractor obligation under the Contract Documents with respect to Changes to the Work.

- 9.4.2. Adjustment to Contract Time.** In the event of any Change(s) to the Work pursuant to this Article 9, the Contract Time shall be extended or reduced by Change Order for a period of time commensurate with the time reasonably necessary to perform such Change. In the event that any Change shall require an extension of the Contract Time, the Prime Contractor shall not be subject to Liquidated Damages for such period of time. In the event that completion of the Work is delayed by causes for which the District is responsible and the delay is unreasonable under the circumstances involved, and not within the

contemplation of the Prime Contractor and the District at the time of execution of the Agreement, the Prime Contractor shall not be precluded from the recovery of damages arising there from.

- 9.4.3. Addition or Deletion of Alternate Bid Item(s).** In the event that the Bid for the Work includes proposal(s) for Alternate Bid Item(s), during Prime Contractor's performance of the Work, the District may elect, pursuant to this Article to add any such Alternate Bid Item(s) if the same did not form a basis for award of the Contract or delete any such Alternate Bid Item(s) if the same formed a basis for award of the Contract. In the event that the District shall elect to add or delete any such Alternate Bid Item(s), the cost or credit for such Alternate Bid Item(s) shall be as set forth in the Prime Contractor's Bid Proposal.

**9.5. Change Orders.** If the District approves of a Change, a written Change Order prepared by the Consultant on behalf of the District shall be forwarded to the Prime Contractor describing the Change and setting forth the adjustment to the Contract Time and the Contract Price, if any, on account of such Change. All Change Orders shall be in full payment and final settlement of all claims for direct, indirect and consequential costs, including without limitation, costs of delays or impacts related to, or arising out of, items covered and affected by the Change Order, as well as any adjustments to the Contract Time. Any claim or item relating to any Change incorporated into a Change Order not presented by the Prime Contractor for inclusion in the Change Order shall be deemed waived. The Prime Contractor shall execute the Change Order prepared pursuant to the foregoing; once the Change Order has been prepared and forwarded to the Prime Contractor for execution, without the prior approval of the District which may be granted or withheld in the sole and exclusive discretion of the District, the Prime Contractor shall not modify or amend the form or content of such Change Order, or any portion thereof. The Prime Contractor's attempted or purported modification or amendment of any such Change Order, without the prior approval of the District, shall not be binding upon the District; any such unapproved modification or amendment to such Change Order shall be null, void and unenforceable. Unless otherwise expressly provided for in the Contract Documents or in the Change Order, any Change Order issued hereunder shall be binding upon the District only upon action of the District's Board of Trustees approving and ratifying such Change Order. In the event of any amendment or modification made by the Prime Contractor to a Change Order for which there is no prior approval by the District, in accordance with the provisions of this Article 9.5, unless otherwise expressly stated in its approval and ratification of such Change Order, any action of the Board of Trustees to approve and ratify such Change Order shall be deemed to be limited to the Change Order as prepared by the Consultant; such approval and ratification of such Change Order shall not be deemed the District's approval and ratification of any unapproved amendment or modification by the Prime Contractor to such Change Order.

**9.6. Unilateral Change Orders.** A Unilateral Change Order is a Change Order issued by the District before the Prime Contractor and District have agreed on the extent of adjustment of the Contract Time or the Contract Price relating to a Change. The District may, in its sole reasonable discretion, issue a Unilateral Change Order for Changes in the Work approved by the District notwithstanding any failure of the Prime Contractor and the District to reach mutual agreement as to the extent of any adjustment to the Contract Price or Contract Time. The District shall issue a

Unilateral Change Order only in the event that the procedure set forth in Article 9.4.1.2 is utilized to determine the extent of adjustment to the Contract Price, the District has notified the Prime Contractor in writing of the District's determination, and the Prime Contractor has notified the District, the Consultant, and the Project Inspector, in writing, not more than fifteen (15) days from the date of the District's written notice of its objection to the District's determination, or the District's determination has been deemed accepted by the Prime Contractor and the Prime Contractor has waived its right to protest or otherwise object to District's determination by failing to notify the District, the Consultant, and the Project Inspector, in writing, not more than fifteen (15) days from the date of the District's written notice of its objection to the District's determination. A Unilateral Change Order shall describe the Change and set forth the adjustment to the Contract Time and Contract Price, if any, and may include, without limitation, direct costs, indirect costs, and/or costs of delay or impact related to, or arising out of, items covered and/or affected by the Change Order. The District shall forward to the Prime Contractor a copy of the proposed Unilateral Change Order at least five (5) days prior to the Board of Trustees' review and consideration of the Unilateral Change Order for information only. Any Unilateral Change Order issued hereunder shall be binding upon the District and Prime Contractor only upon action of the District's Board of Trustees' approval or ratification of same. Any and all claims by the Prime Contractor arising out of such Unilateral Change Order, and/or the Change giving rise to such Unilateral Change Order, shall accrue as of the date of the Board of Trustees' approval or ratification of each such Unilateral Change Order and shall be subject to the claim provisions set forth in Article 16.11.

**9.7. Construction Change Directive.** A Construction Change Directive is a written instrument issued by the District directing a Change to the Work prior to the Prime Contractor and District reaching full agreement on an adjustment of the Contract Time and/or Contract Price on account of such Change. The Prime Contractor shall promptly commence and diligently complete any Change to the Work subject to a Construction Change Directive issued hereunder. The Prime Contractor shall not be relieved or excused from its prompt commencement and diligent completion of any Change subject to a Construction Change Directive by virtue of the absence or inability of the Prime Contractor and the District to agree upon the extent of any adjustment to the Contract Time or the Contract Price for such Change. The issuance of a Change Order pursuant to this Article 9 in connection with any Change authorized by the District under this Article 9.1 shall not be deemed a condition precedent to Prime Contractor's obligation to promptly commence and diligently complete any such Change authorized by a Construction Change Directive hereunder. Upon completion of the Work such Change, if the Prime Contractor and District have not agreed on the Contract Time and Contract Price for such Change, District shall issue a Unilateral Change Order pursuant to Article 9.6 hereof.

**9.8. Prime Contractor Notice of Changes.** If the Prime Contractor should claim that an instruction, request, the Drawings, the Specifications, action, condition, omission, default, or other situation obligates the District to increase the Contract Price or to extend the Contract Time, the Prime Contractor shall notify the District's Inspector and the Consultant, in writing, of such claim within ten (10) days from the date of its actual or constructive notice of the factual basis supporting the same. The District shall consider any such claim of the Prime Contractor only if sufficient supporting documentation is submitted with the Prime Contractor's notice to the District's Inspector and the Consultant. Time is of the essence in Prime Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to the

address such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. Accordingly, Prime Contractor acknowledges that its failure, for any reason, to give written notice (with sufficient supporting documentation to permit the District's review and evaluation) within ten (10) days of its actual or constructive knowledge of any instruction, request, Drawings, Specifications, action, condition, omission, default or other situation for which the Prime Contractor believes there should an adjustment of the Contract Time or the Contract Price shall be deemed Prime Contractor's waiver, release, discharge and relinquishment of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of any such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. In the event that the District determines that the Contract Price or the Contract Time are subject to adjustment based upon the events, circumstances and supporting documentation submitted with the Prime Contractor's written notice under this Article 9.6, any such adjustment shall be determined in accordance with the provisions of Articles 9.4.1 and 9.4.2.

**9.9. Disputed Changes.** In the event of any dispute or disagreement between the Prime Contractor and the District or the Consultant regarding the characterization of any item as a Change to the Work or as to the appropriate adjustment of the Contract Price or the Contract Time on account thereof, the Prime Contractor shall promptly proceed with the performance of such item of the Work, subject to a subsequent resolution of such dispute or disagreement in accordance with the terms of the Contract Documents. The Prime Contractor's failure or refusal to so proceed with such Work may be deemed to be Prime Contractor's default of a material obligation of the Prime Contractor under the Contract Documents.

**9.10. Emergencies.** In an emergency affecting the safety of life, or of the Work, or of property, the Prime Contractor, without special instruction or prior authorization from the District or the Consultant, is permitted to act at its discretion to prevent such threatened loss or injury. Any compensation claimed by the Prime Contractor on account of such emergency work shall be submitted and determined in accordance with this Article 9.

**9.11. Minor Changes in the Work.** The Consultant may order minor Changes in the Work not involving an adjustment in the Contract Price or the Contract Time and not inconsistent with the intent of the Contract Documents. Such Changes shall be effected by written order and shall be binding on the District and the Prime Contractor. The Project Manager or the District's Inspector may direct the Prime Contractor to perform Changes provided that each such Change does not result in an increase of more than Five Hundred Dollars (\$500) to the Contract Price and no adjustment of the Contract Time. The Prime Contractor shall carry out such orders promptly.

**9.12. Unauthorized Changes.** Any Work beyond the lines and grades shown on the Contract Documents, or any extra Work performed or provided by the Prime Contractor without notice to the Consultant and the District's Inspector in the manner and within the time set forth in Articles 9.2 or 9.6 shall be considered unauthorized and at the sole expense of the Prime Contractor. Work so done will not be measured or paid for, no extension to the Contract Time will be granted on account thereof and any such Work may be ordered removed at the Prime Contractor's sole cost and expense. The failure of the District to direct or order removal of such Work shall not constitute acceptance or

approval of such Work nor relieve the Prime Contractor from any liability on account thereof.

## **ARTICLE 10: SEPARATE CONTRACTORS**

**10.1. District's Right to Award Separate Contracts.** The District reserves the right to perform construction or operations related to the Project with the District's own forces or to award separate contracts in connection with other portions of the Project or other construction or operations at or about the Site. If the Prime Contractor claims that delay or additional cost is involved because of such action by the District, the Prime Contractor shall seek an adjustment to the Contract Price or the Contract Time as provided for in the Contract Documents. Failure of the Prime Contractor to request such an adjustment of the Contract Time or the Contract Price in strict conformity with the provisions of the Contract Documents applicable thereto shall be deemed a waiver of the same.

**10.2. District's Coordination of Separate Contractors.** The District shall provide for coordination of the activities of the District's own forces and of each separate contractor with the Work of the Prime Contractor, and with that of other Prime Contractors who shall cooperate with them. Each Prime Contractor shall participate with other separate contractors and the District in reviewing their respective Construction Schedules when directed to do so. The Prime Contractor shall make any revisions to the Approved Construction Schedule for the Work hereunder deemed necessary after a joint review and mutual agreement. The Construction Schedules shall then constitute the Construction Schedules to be used by the Prime Contractor, separate contractors and the District until subsequently revised.

**10.3. Mutual Responsibility.** The Prime Contractor shall afford the District and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities at the site of the Work and shall connect and coordinate the Contractor's Work, construction and operations with theirs as required by the Contract Documents.

**10.4. Discrepancies or Defects.** If part of the Prime Contractor's Work depends for proper execution or results upon construction or operations by the District or a separate Prime Contractor, the Prime Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Consultant and the District's Inspector any apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Prime Contractor to so report shall constitute an acknowledgment that the District's or separate Prime Contractor's completed or partially completed construction is fit and proper to receive the Prime Contractor's Work, except as to defects not then discoverable by the Prime Contractor's reasonable diligence.

## **ARTICLE 11: TESTS AND INSPECTIONS**

### **11.1. Tests; Inspections; Observations.**

**11.1.1. Prime Contractor's Notice.** If the Contract Documents, laws, ordinances or any public authority with jurisdiction over the Work requires the Work, or any

portion thereof, to be specially tested, inspected or approved, the Prime Contractor shall give the Consultant, the Project Manager and the District's Inspector written notice of the readiness of such Work for observation, testing or inspection at least two (2) working days prior to the time for the conducting of such test, inspection or observation. If inspection, testing or observation is by authority other than the District, the Prime Contractor shall inform the District's Inspector and the Project Manager not less than two (2) working days prior to the date fixed for such inspection, test or observation. The Prime Contractor shall not cover up any portion of the Work subject to tests, inspections or observations prior to the completion and satisfaction of the requirements of such test, inspection or observation. In the event that any portion of the Work subject to tests, inspection or approval shall be covered up by Prime Contractor prior to completion and satisfaction of the requirements of such tests, inspection or approval, Prime Contractor shall be responsible for the uncovering of such portion of the Work as is necessary for performing such tests, inspection or approval without adjustment of the Contract Price or the Contract Time on account thereof.

**11.1.2. Cost of Tests and Inspections.** Except as set forth below, the District will pay for fees, costs and expenses to complete the initial tests/inspections of portions of the Work as required by law, code or regulation, provided that such tests/inspections are conducted and completed at a location within a one hundred (100) mile radius of the Site. The foregoing notwithstanding, if the portion(s) of the Work subject to tests/inspections is/are not ready for such test/inspection at the time indicated in the Contractor's notice under Article 11.1.1 or if upon completion of such test/inspection, the portion(s) of the Work subject to such test/inspection do not meet or exceed the minimum requirements of such test/inspection, the Contractor shall be solely responsible for the payment of all fees, costs or expenses arising out of or related in any manner to subsequent tests/inspections of such portion(s) of the Work. Notwithstanding the District's payment of fees, costs or expenses for conducting initial tests/inspections, if any actions or failures to act of the Contractor or person or entity providing or performing Work under the direction or control of the Contractor require tests/inspections to be conducted over a period of more than eight (8) hours per day by any single person or on weekends/holidays, the Contractor shall be solely responsible for the payment of fees, costs or expenses which result from test/inspection services which exceed eight (8) hours per day by any single person or on Weekends/holidays. If any tests/inspections are conducted outside a one hundred (100) mile radius of the Site, the Contractor shall be solely responsible for all costs, fees or expenses to conduct and complete such tests/inspections conducted at such location including, without limitation, costs to complete such tests/inspections and travel, meal and related expenses.

**11.1.3. Testing/Inspection Laboratory.** The District shall select duly qualified person(s) or testing laboratory(ies) to conduct the tests and inspections to be paid for by the District and required by the Contract Documents. All such tests and inspections



shall be in conformity with Title 24 of the California Code of Regulations. Where inspection or testing is to be conducted by an independent laboratory or testing agency, materials or samples thereof shall be selected by the laboratory, testing agency, the District's Inspector, the Project Manager or the Consultant and not by the Prime Contractor.

**11.2. Additional Tests, Inspections and Approvals.** If the Consultant, the Project Manager, the District's Inspector or public authorities having jurisdiction over the Work determine that portions of the Work require additional testing, inspection or approval, the Consultant will, upon written authorization from the District, instruct the Prime Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the District, and the Prime Contractor shall give timely notice to the Consultant, the Project Manager and the District's Inspector of when and where tests and inspections are to be made so the District's Inspector and the Consultant may observe such procedures. The District shall bear the costs of such additional tests, inspections or approvals, except to the extent that such additional tests, inspections or approvals reveal any failure of the Work to comply with the requirements of the Contract Documents, in which case the Prime Contractor shall bear all costs made necessary by such failures, including without limitation, the costs of corrections, repeat tests, inspections or approvals and the costs of the Consultant's services or its consultants in connection therewith.

**11.3. Delivery of Certificates.** Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Prime Contractor and promptly delivered to the Consultant.

**11.4. Timeliness of Tests, Inspections and Approvals.** Tests or inspections required and conducted pursuant to the Contract Documents shall be made or arranged by Prime Contractor to avoid delay in the progress of the Work.

## ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

### 12.1. Inspection of the Work.

**12.1.1. Access to the Work.** All Work done and all materials and equipment forming a part of the Work or incorporated into the Work are subject to inspection by the District, the Project Manager, the Consultant and the District's Inspector for conformity with the Contract Documents. The Prime Contractor shall, at its cost and without adjustment to the Contract Price or the Contract Time, furnish any facilities necessary for sufficient and safe access to the Work for purposes of inspection by the District, the Project Manager, the Consultant, the District's Inspector, DSA or any other public or quasi-public authority with jurisdiction over the Work or any portion thereof.

**12.1.2. Limitations upon Inspections.** Inspections, tests, measurements, or other acts of

the Consultant and the District's Inspector hereunder are for the sole purpose of assisting them in determining that the Work, materials, equipment, progress of the Work, and quantities generally comply and conform to the requirements of the Contract Documents. These acts or functions shall not relieve the Prime Contractor from performing the Work in full compliance with the Contract Documents. No inspection by the Consultant or the District's Inspector shall constitute or imply acceptance of Work inspected. Inspection of the Work hereunder is in addition to, and not in lieu of, any other testing, inspections or approvals of the Work required under the Contract Documents.

**12.2. Uncovering of Work.** If any portion of the Work is covered contrary to the request of the Consultant, the District's Inspector or the requirements of the Contract Documents, it must, if required by the Consultant or the District's Inspector, be uncovered for observation by the Consultant and the District's Inspector and be replaced at the Prime Contractor's expense without adjustment of the Contract Time or the Contract Price.

**12.3. Rejection of Work.** Prior to the District's Final Acceptance of the Work, any Work or materials or equipment forming a part of the Work or incorporated into the Work which is defective or not in conformity with the Contract Documents may be rejected by the District, the Project Manager the Consultant or the District's Inspector and the Prime Contractor shall correct such rejected Work without any adjustment to the Contract Price or the Contract Time, even if the Work, materials or equipment have been previously inspected by the Consultant or the District's Inspector or even if they failed to observe the defective or nonconforming Work, materials or equipment.

**12.4. Correction of Work.** The Prime Contractor shall promptly correct any portion of the Work rejected by the District, the Project Manager, the Consultant or the District's Inspector for failing to conform to the requirements of the Contract Documents, or which is determined by them to be defective, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Prime Contractor shall bear all costs of correcting such rejected Work, including additional testing and inspections and compensation for the Consultant's services and expenses made necessary thereby. The Prime Contractor shall bear all costs of correcting destroyed or damaged construction, whether completed or partially completed, of the District or separate contractors, caused by the Prime Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents, or which is defective.

**12.5. Removal of Non-Conforming or Defective Work.** The Prime Contractor shall, at its sole cost and expense, remove from the site all portions of the Work which are defective or are not in accordance with the requirements of the Contract Documents which are neither corrected by the Prime Contractor nor accepted by the District.

**12.6. Failure of Prime Contractor to Correct Work.** If the Prime Contractor fails to commence to correct defective or non-conforming Work within 3 days of notice of such condition and promptly thereafter complete the same within a reasonable time, the District may correct it in accordance with the Contract Documents. If the Prime Contractor does not proceed with correction of such defective or non-conforming Work within the time fixed herein, the District may remove it and store the salvable materials or equipment at the Prime Contractor's expense. If the Prime Contractor does not

pay costs of such removal and storage after written notice, the District may sell such materials or equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Prime Contractor, including without limitation compensation for the Consultant's services, attorney's fees and other expenses made necessary thereby. If such proceeds of sale do not cover costs which the Prime Contractor should have borne, the Contract Price shall be reduced by the deficiency. If payments of the Contract Price then or thereafter due the Prime Contractor are not sufficient to cover such amount, the Prime Contractor and the Surety shall promptly pay the difference to the District.

**12.7. Acceptance of Defective or Non-Conforming Work.** The District may, in its sole and exclusive discretion, elect to accept Work which is defective or which is not in accordance with the requirements of the Contract Documents, instead of requiring its removal and correction, in which case the Contract Price shall be reduced as appropriate and equitable.

### ARTICLE 13: WARRANTIES

**13.1. Workmanship and Materials.** The Prime Contractor warrants to the District that all materials and equipment furnished under the Contract Documents shall be new, of good quality and of the most suitable grade and quality for the purpose intended, unless otherwise specified in the Contract Documents. All Work shall be of good quality, free from faults and defects and in conformity with the requirements of the Contract Documents. If required by the Consultant or the District, the Prime Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment incorporated into the Work. Any Work or portion thereof not conforming to these requirements, including substitutions or alternatives not properly approved in accordance with the Contract Documents may be deemed defective. Where there is an approved substitution of, or alternative to, material or equipment specified in the Contract Documents, the Prime Contractor warrants to the District that such installation, construction, material, or equipment will equally perform the function and have the quality of the originally specified material or equipment. The Prime Contractor expressly warrants the merchantability, the fitness for use, and quality of all substitute or alternative items in addition to any warranty given by the manufacturer or supplier of such item.

**13.2. Warranty Work.** If, within one year after the date of Final Acceptance, any of the Work is found to be defective or not in accordance with the requirements of the Contract Documents, or otherwise contrary to the warranties contained in the Contract Documents, the Prime Contractor shall commence all necessary corrective action not more than seven (7) days after receipt of a written notice from the District to do so, and to thereafter diligently complete the same. In the event that Prime Contractor shall fail or refuse to commence correction of any such item within said seven (7) day period or to diligently prosecute such corrective actions to completion, the District may, without further notice to Prime Contractor, cause such corrective Work to be performed and completed. In such event, Prime Contractor and Prime Contractor's Performance Bond Surety shall be responsible for all costs in connection with such corrective Work, including without limitation, general administrative overhead costs of the District in securing and overseeing such corrective Work. Nothing contained herein shall be construed to establish a period of limitation with respect to any obligation of the Prime Contractor under the Contract Documents. The obligations of the Prime Contractor hereunder shall be in addition to, and not in lieu of, any other obligations imposed by

any special guarantee or warranty required by the Contract Documents, guarantees or warranties provided by any manufacturer of any item or equipment forming a part of, or incorporated into the Work, or otherwise recognized, prescribed or imposed by law. Neither the District's Final Acceptance, the making of Final Payment, any provision in Contract Documents, nor the use or occupancy of the Work, in whole or in part, by District shall constitute acceptance of Work not in accordance with the Contract Documents nor relieve the Prime Contractor or the Prime Contractor's Performance Bond Surety from liability with respect to any warranties or responsibility for faulty or defective Work or materials, equipment and workmanship incorporated therein.

**13.3. Guarantee.** Upon completion of the Work, Prime Contractor shall execute and deliver to the District the form of Guarantee included within the Contract Documents. Pursuant to Article 8.4.2 above, Prime Contractor's execution and delivery of the form of Guarantee is an express condition precedent to any obligation of the District to disburse the Final Payment to the Prime Contractor.

**13.4. Survival of Warranties; Surety Obligations.** The provisions of this Article 13 shall survive the Prime Contractor's completion of Work under the Contract Documents, the District's Final Acceptance or the termination of the Contract. The obligations of the Performance Bond Surety shall include, without limitation, assumption, performance, discharge and satisfaction of the Prime Contractor obligations under this Article 13 in the event of the failure or refusal of the Prime Contractor to assume, perform, discharge and satisfaction the obligations of the Prime Contractor set forth in this Article 13.

#### **ARTICLE 14: SUSPENSION OF WORK**

**14.1. District's Right to Suspend Work.** The District may, without cause, and without invalidating or terminating the Contract, order the Prime Contractor, in writing, to suspend, delay or interrupt the Work in whole or in part for such period of time as the District may determine. The Prime Contractor shall resume and complete the Work suspended by the District in accordance with the District's directive, whether issued at the time of the directive suspending the Work or subsequent thereto.

**14.2. Adjustments to Contract Price and Contract Time.** In the event the District shall order suspension of the Work, an adjustment shall be made to the Contract Price for increases in the direct cost of performance of the Work of the Contract Documents, actually caused by suspension, delay or interruption ordered by the District; provided however that no adjustment of the Contract Price shall be made to the extent: (i) that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Prime Contractor is responsible under the Contract Documents; or (ii) that an equitable adjustment is made or denied under another provision of the Contract Documents. The foregoing notwithstanding, any such adjustment of the Contract Price shall not include any adjustment to increase the Prime Contractor's overhead, general administrative costs or profit, all of which will remain as reflected in the Cost Breakdown submitted by the Prime Contractor pursuant to the Contract Documents. In the event of the District's suspension of the Work, the Contract Time shall be equitably adjusted.

**ARTICLE 15: TERMINATION****15.1. Termination for Cause.**

**15.1.1. District's Right to Terminate.** The District may terminate the Contract upon the occurrence of anyone or more of the following events of the Prime Contractor's default: (i) if the Prime Contractor refuses or fails to prosecute the Work with diligence as will insure Substantial Completion of the Work within the Contract Time, or if the Prime Contractor fails to substantially Complete the Work within the Contract Time; (ii) if the Prime Contractor becomes bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or if the Prime Contractor or a third party files a petition to reorganize or for protection under any bankruptcy or similar laws, or if a trustee or receiver is appointed for the Prime Contractor or for any of the Prime Contractor's property on account of the Prime Contractor's insolvency, and the Prime Contractor or its successor in interest does not provide adequate assurance of future performance in accordance with the Contract Documents within 10 days of receipt of a request for such assurance from the District; (iii) if the Prime Contractor repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment; (iv) if the Prime Contractor repeatedly fails to make prompt payments to any Subcontractor, of any tier, or Material Suppliers or others for labor, materials or equipment; (v) if the Prime Contractor disregards laws, ordinances, rules, codes, regulations, orders applicable to the Work or similar requirements of any public entity having jurisdiction over the Work; (iv) if the Prime Contractor disregards proper directives of the Consultant, the District's Inspector or District under the Contract Documents; (vii) if the Prime Contractor performs Work which deviates from the Contract Documents and neglects or refuses to correct such Work; or (viii) if the Prime Contractor otherwise violates in any material way any provisions or requirements of the Contract Documents. Once the District determines that sufficient cause exists to justify the action, the District may terminate the Contract without prejudice to any other right or remedy the District may have, after giving the Prime Contractor and the Surety at least seven (7) days advance written notice of the effective date of termination. The District shall have the sole discretion to permit the Prime Contractor to remedy the cause for the termination without waiving the District's right to terminate the Contract, or otherwise waiving, restricting or limiting any other right or remedy of the District under the Contract Documents or at law.

**15.1.2. District's Rights upon Termination.** In the event that the Contract is terminated pursuant to this Article 15.1, the District may take over the Work and prosecute it to completion, by contract or otherwise, and may exclude the Prime Contractor from the site. The District may take possession of the Work and of all of the Prime Contractor's tools, appliances, construction equipment, machinery, materials, and plant which may be on the site of the Work, and use the same to the full

extent they could be used by the Prime Contractor without liability to the Prime Contractor. In exercising the District's right to prosecute the completion of the Work, the District may also take possession of all materials and equipment stored at the site of the Work or for which the District has paid the Prime Contractor but which are stored elsewhere, and finish the Work as the District deems expedient. In exercising the District's right to prosecute the completion of the Work, the District shall have the right to exercise its sole discretion as to the manner, methods, and reasonableness of the costs of completing the Work and the District shall not be required to obtain the lowest figure for completion of the Work. In the event that the District takes bids for remedial Work or completion of the Work, the Prime Contractor shall not be eligible for the award of such contract(s).

- 15.1.3. **Completion by the Surety.** In the event that the Contract is terminated pursuant to this Article 15.1, the District may demand that the Surety take over and complete the Work. The District may require that in so doing, the Surety not utilize the Prime Contractor in performing and completing the Work. Upon the failure or refusal of the Surety to take over and begin completion of the Work within twenty (20) days after demand therefore, the District may take over the Work and prosecute it to completion as provided for above.
- 15.1.4. **Assignment and Assumption of Subcontracts.** The District shall, in its sole and exclusive discretion, have the option of requiring any Subcontractor or Material Supplier to perform in accordance with its Subcontract or Purchase Order with the Prime Contractor and assign the Subcontract or Purchase Order to the District or such other person or entity selected by the District to complete the Work.
- 15.1.5. **Costs of Completion.** In the event of termination under this Article 15.1, the Prime Contractor shall not be entitled to receive any further payment of the Contract Price until the Work is completed. If the unpaid balance of the Contract Price as of the date of termination exceeds the District's direct and indirect costs and expenses for completing the Work, including without limitation, attorneys' fees and compensation for additional professional and consultant services, such excess shall be used to pay the Prime Contractor for the cost of the Work performed prior to the effective date of termination with a reasonable allowance for overhead and profit. If the District's costs and expenses to complete the Work exceed the unpaid Contract Price, the Prime Contractor and/or the Surety shall pay the difference to the District.
- 15.1.6. **Prime Contractor Responsibility for Damages.** The Prime Contractor and the Surety shall be liable for all damage sustained by the District resulting from, in any manner, the termination of Contract under this Article 15.1, including without limitation, attorneys' fees, and for all costs necessary for repair and completion of the Work over and beyond the Contract Price.
- 15.1.7. **Conversion to Termination for Convenience.** In the event the Contract is terminated under this Article 15.1, and it is determined, for any reason, that the

Prime Contractor was not in default under the provisions hereof, the termination shall be deemed a Termination for Convenience of the District and thereupon, the rights and obligations of the District and the Prime Contractor shall be determined in accordance with Article 15.2 hereof.

**15.1.8. District's Rights Cumulative.** In the event the Contract is terminated pursuant to this Article 15.1, the termination shall not affect or limit any rights or remedies of the District against the Prime Contractor or the Surety. The rights and remedies of the District under this Article 15.1 are in addition to, and not in lieu of, any other rights and remedies provided by law or otherwise under the Contract Documents. Any retention or payment of monies to the Prime Contractor by the District shall not be deemed to release the Prime Contractor or the Surety from any liability hereunder.

**15.2. Termination for Convenience of the District.** The District may at any time, in its sole and exclusive discretion, by written notice to the Prime Contractor, terminate the Contract in whole or in part when it is in the interest of, or for the convenience of, the District. In such case, the Prime Contractor shall be entitled to payment for: (i) Work actually performed and in place as of the effective date of such termination for convenience of the District, with a reasonable allowance for profit and overhead on such Work, and (ii) reasonable termination expenses for reasonable protection of Work in place and suitable storage and protection of materials and equipment delivered to the site of the Work but not yet incorporated into the Work, provided that such payments exclusive of termination expenses shall not exceed the total Contract Price as reduced by payments previously made to the Prime Contractor and as further reduced by the value of the Work as not yet completed. The Prime Contractor shall not be entitled to profit and overhead on Work which was not performed as of the effective date of the termination for convenience of the District. The District may, in its sole and exclusive discretion, elect to have assigned to the District any Subcontract or Purchase Order to which the Prime Contractor is a party and thereupon requiring any Subcontractor or Material Supplier to performance in accordance with the Subcontract or Purchase Order between such Subcontractor or Material Supplier and the Prime Contractor. If the District elects to effectuate such assignment of any such Subcontract or Purchase Order, such assignment shall be effective in accordance with the District's written notice to the Prime Contractor and any Subcontractor or Material Supplier of the District's election to have such Subcontract or Purchase Order assigned to the District.

## ARTICLE 16: MISCELLANEOUS

**16.1. Governing Law.** This Contract shall be governed by and interpreted in accordance with the laws of the State of California.

**16.2. Marginal Headings; Interpretation.** The titles of the various Articles of these General Conditions and elsewhere in the Contract Documents are used for convenience of reference only and are not intended to, and shall in no way, enlarge or diminish the rights or obligations of the District or the Prime Contractor and shall have no effect upon the construction or interpretation of the Contract Documents. The Contract Documents shall be construed as a whole in accordance with

their fair meaning and not strictly for or against the District or the Prime Contractor.

**16.3. Successors and Assigns.** Except as otherwise expressly provided in the Contract Documents, all terms, conditions and covenants of the Contract Documents shall be binding upon, and shall inure to the benefit of the District and the Prime Contractor and their respective heirs, representatives, successors-in-interest and assigns.

**16.4. Cumulative Rights and Remedies; No Waiver.** Duties and obligations imposed by the Contract Documents and rights and remedies available there under shall be in addition to and not in lieu of or otherwise a limitation or restriction of duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the District shall constitute a waiver of a right or remedy afforded it under the Contract Documents or at law nor shall such an action or failure to act constitute approval of or acquiescence in a breach hereunder, except as may be specifically agreed in writing.

**16.5. Severability.** In the event any provision of the Contract Documents shall be deemed illegal, invalid, unenforceable and/or void, by a court or any other governmental agency of competent jurisdiction, such provision shall be deemed to be severed and deleted from the Contract Documents, but all remaining provisions hereof, shall in all other respects, continue in full force and effect.

**16.6. No Assignment by Prime Contractor.** The Prime Contractor shall not sublet or assign the Contract, or any portion thereof, or any monies due there under, without the express prior written consent and approval of the District, which approval may be withheld in the sole and exclusive discretion of the District. The District's approval to such assignment shall be upon such terms and conditions as determined by the District in its sole and exclusive discretion.

**16.7. Gender and Number.** Whenever the context of the Contract Documents so require, the neuter gender shall include the feminine and masculine, the masculine gender shall include the feminine and neuter, the singular number shall include the plural and the plural number shall include the singular.

**16.8. Independent Prime Contractor Status.** In performing its obligations under the Contract Documents, the Prime Contractor shall be deemed an independent contractor to the District and not an agent or employee of the District.

**16.9. Notices.** Except as otherwise expressly provided for in the Contract Documents, all notices which the District or the Prime Contractor may be required, or may desire, to serve on the other, shall be effective only if delivered by personal delivery or by postage prepaid, First Class Certified Return Receipt Requested United States Mail, addressed to the District or the Prime Contractor at their respective address set forth in the Contract Documents, or such other address(es) as either the District or the Prime Contractor may designate from time to time by written notice to the other in conformity with the provisions hereof. In the event of personal delivery, such notices shall be deemed effective upon delivery, provided that such personal delivery requires a signed receipt by the recipient acknowledging delivery of the same. In the event of mailed notices, such notice shall



be deemed effective on the third working day after deposit in the mail.

**16.10. Disputes; Continuation of Work.** Notwithstanding any claim, dispute or other disagreement between the District and the Prime Contractor regarding performance under the Contract Documents, the scope of Work there under, or any other matter arising out of or related to, in any manner, the Contract Documents, the Work or the Project, the Prime Contractor shall proceed diligently with performance of the Work and its other obligations under the Contractor Documents in accordance with the District's written direction, pending any final determination or decision regarding any such claim, dispute or disagreement.

**16.11. Dispute Resolution; Arbitration.**

**16.11.1. Claims Under \$375,000.00.** Claims between the District and the Contractor of \$375,000.00 or less shall be resolved in accordance with the procedures established in Part 3, Chapter 1, Article 1.5 of the California Public Contract Code, §§20104 et seq.; provided however that California Public Contract Code §20104.2(a) shall not supersede the requirements of the Contract Documents with respect to the Contractor's notification to the District of such claim or extend the time for the giving of such notice as provided in the Contract Documents. The term "claims" as used herein shall be as defined in California Public Contract Code §20104(b) (2).

**16.11.2. Arbitration.** Except as provided in Article 16.11.1, any other claims, disputes, disagreements or other matters in controversy between the District and the Contractor arising out of, or related, in any manner, to the Contract Documents, or the interpretation, clarification or enforcement thereof shall be resolved by arbitration conducted by a JAMS arbitrator identified as having expertise in Construction and in accordance with the Comprehensive Arbitration Rules and Procedures of JAMS in effect as of the date that a Demand for Arbitration is filed, except as expressly modified herein. The locale for any arbitration commenced hereunder shall be the regional office of JAMS closest to the Site.

**16.11.3. Government Code Claims.** Pursuant to Government Code Section 930.6, any and all claims, demands, disputes, disagreements or other matters in controversy between the Contractor and the District for money or damages, including, without limitation, a demand for arbitration, shall be deemed a "suit for money or damages" and shall be subject to the provisions of Government Code Sections 945.4, 945.6 and 946. Notwithstanding the dispute resolution and arbitration provisions set forth in Article 16 herein, all claims demands, disputes, disagreements or other matters in controversy between the Contractor and the District seeking money or damages in any sum shall first be presented to the District's Board of Trustees and acted upon or deemed rejected as a condition precedent to suit including, without limitation, demand for arbitration, in accordance with California Government Code section 900, et seq.

**16.11.4. Not Used.**

**16.11.5. Demand for Arbitration.** A Demand for Arbitration shall be filed and served within a reasonable time after the occurrence of the claim, dispute or other disagreement giving rise to the Demand for Arbitration, but in no event shall a Demand for Arbitration be filed or served after the date when the institution of legal or equitable proceedings based upon such claim, dispute or other disagreement would be barred by the California Government Code or applicable statute of limitations. In the event more than one Demand for Arbitration is made by either the District or the Contractor, all such controversies shall be consolidated into a single arbitration proceeding, unless otherwise agreed to by the District and the Contractor.

**16.11.6. Third Parties.** The Contractor's Surety, a Subcontractor or Material Supplier to the Contractor and other third parties may be permitted to join in and be bound by an arbitration commenced hereunder if required by the terms of their respective agreements with the Contractor, except to the extent that such joinder would unduly delay or complicate the expeditious resolution of the claim, dispute or other disagreement between the District and the Contractor, in which case an appropriate severance order shall be issued by the arbitrator.

**16.11.7. Discovery.** In connection with any arbitration proceeding commenced hereunder, the discovery rights and procedures provided for in California Code of Civil Procedure § 1283.05 shall be applicable, and the same shall be deemed incorporated herein by this reference.

**16.11.8. Arbitrator's Award.** Notwithstanding Rule 24 of JAMS Comprehensive Arbitration Rules and Procedures, in accordance with California Code of Civil Procedure § 1296, in any arbitration to resolve a dispute relating to the Contract Documents, the arbitrator's award shall be supported by law and substantial evidence; the District and Contractor hereby expressly agree that a court shall, subject to California Code of Civil Procedure §1286.4, vacate the award if after review of the award it determines either that the award is not supported by substantial evidence or that it is based on an error of law. Any arbitration award that does not include written findings of fact and conclusions of law in conformity with California Code of Civil Procedure §1296 shall be invalid and unenforceable. Subject to the foregoing provisions of this Article 16.11, the arbitrator's award shall be final and binding upon the District and the Contractor.

**16.11.9. Costs.** The expenses and fees of the arbitrator shall be divided equally among the parties to the arbitration. Each party to any arbitration commenced hereunder shall be responsible for and shall bear its own attorneys' fees, witness fees and other cost and expense incurred in connection with such arbitration. The foregoing notwithstanding, the arbitrator may award arbitration costs, including arbitrators' fees but excluding attorneys' fees, to the prevailing party.

**16.11.10. Confirmation of Award.** The confirmation, enforcement, vacation or correction of an arbitration award rendered hereunder shall be the Superior Court of the State of California for the county in which the Site is situated. The substantive and procedural rules for such post-award proceedings shall be as set forth in California Code of Civil Procedure §1285 et seq.

**16.11.11. Not Used.**

**16.11.12. Limitation on Damages.** In the event of the District's breach or default of its obligations under the Agreement, the damages, if any, recoverable by the Contractor shall be limited to general damages which are directly caused by the breach or default of the District and shall exclude any and all special or consequential damages, if any. By executing the Agreement, the Contractor expressly acknowledges the foregoing limitation to recovery of only general damages from the District if the District is in breach or default of its obligations under the Agreement; the Contractor expressly waives and relinquishes any recovery of special or consequential damages from the District including, without limitation, damages for: i) lost or impaired bonding capacity; and/or, ii) lost profits arising out of or in connection with any past, present, or future work of improvement, except for the Project which is the subject of the Contract Documents.

**16.11.13. Inapplicability to Bid Bond.** The provisions of this Article 16.11 shall not be applicable to disputes, disagreements or enforcement of rights or obligations under the Bid Bond; all claims, disputes and actions to enforce rights or obligations under the Bid Bond shall be adjudicated only by judicial proceedings commenced in a court of competent jurisdiction.

**16.12. Capitalized Terms.** Except as otherwise expressly provided, capitalized terms used in the Contract Documents shall have the meaning and definition for such terms as set forth in the Contract Documents.

**16.13. Attorney's Fees.** Except as expressly provided for in the Contract Documents, or authorized by law, neither the District nor the Prime Contractor shall recover from the other any attorneys' fees or other costs associated with or arising out of any legal, administrative or other proceedings filed or instituted in connection with or arising out of the Contract Documents or the performance of either the District or the Prime Contractor thereunder.

**16.14. Provisions Required by Law Deemed Inserted.** Each and every provision of law and clause required by law to be inserted in the Contract Documents shall be deemed to be inserted herein and the Contract Documents shall be read and enforced as though such provision or clause are included herein, and if through mistake, or otherwise, any such provision or clause is not inserted or if not correctly inserted, then upon application of either party, the Contract Documents shall forthwith be physically amended to make such insertion or correction.

**16.15. Days.** Unless otherwise stated, references to "days" in the Contract Documents shall be deemed to be calendar days.

**16.16. Entire Agreement.** The Contract Documents contain the entire agreement and understanding between the District and the Prime Contractor concerning the subject matter hereof, and supersedes and replaces all prior negotiations, proposed agreements or amendments, whether written or oral. No amendment or modification to any provision of the Contract Documents shall be effective or enforceable except by an agreement in writing executed by the District and the Prime Contractor.

[END OF SECTION]

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## SPECIAL CONDITIONS

**1. Application of Special Conditions.** These Special Conditions for a part of the Contract Documents for the Work generally described as: **Bid# 1534 - Structured Cabling Upgrade, Visalia Campus Bid Package**

**2. Drawings and Specifications.** The number of sets of the Drawings and Specifications which the District will provide to the Contractor, pursuant to Article 2.1.3 of the General Conditions is two (2) hard paper copies and one (1) electronic (PDF) copy, upon request. Additional sets of the Drawings and Specifications may be obtained by the Contractor from the District at the cost of reproduction.

**3. Contacts.** College of the Sequoias - District Police emergency phone (24 hours/7 days a week): (559) 730-3999.

**4. Insurance.**

**4.1. Insurance Requirements for Contractor and Subcontractors.** Pursuant to Article 6 of the General Conditions, the Contractor and each Subcontractor shall obtain and maintain the following insurance coverage with the following minimum coverage amounts:

Workers Compensation Insurance: (In accordance with applicable law)

Employers Liability Insurance: \$1,000,000

Commercial General Liability Insurance

(coverage including bodily injury, death, property damage, motor vehicle liability)

Per Occurrence: \$1,000,000

Aggregate: \$2,000,000

**4.2. Builders Risk Insurance.** In accordance with Article 6.3 of the General Conditions, coverage shall be provided by the Contractor for the full insurable value of the Work. Coverage for the perils of earthquakes will not be included within the scope of coverage under the Builders Risk Insurance Policy.

**5. Contract Time for Final Completion of Bid Package.** The District intends to construct the Work using a "General Contractor" approach. The Contractor awarded the Contract for the Bid Package must complete the Work of the Bid Package in coordination with the Contractor and its Subcontractors awarded the contract for other portions of the Work ("the General Construction Bid Package"); coordination of the Work of the Bid Package and the work of the General Construction Bid Package will be through the District. The Work of the Bid Package is described elsewhere in the Contract Documents. The Commencement Date for the Work of the Bid Package shall be the

date set forth in the Notice to Proceed issued by or on behalf of the District. The Contractor awarded the Bid Package must achieve Final Completion of the Work of the Bid Package on or before the Final Completion Date set forth herein. Failure of the Contractor awarded the Contract for the Bid Package to complete Substantial Completion within the time set forth herein will subject the Contractor to as set forth in Article 9 below.

**6. Milestones.**

**6.1. Completion of Interim Milestones.** The Contractor awarded the Bid Package must also complete the Interim Milestones, if any, indicated below, subject to modifications thereto issued in accordance with the Contract Documents. Failure of the Contractor awarded the Contract for the Bid Package to complete Interim Milestones, if any, within the time set forth below will subject the Contractor to Liquidated Damages set forth below.

**6.2. Proposed Milestone Completion Schedule.** In accordance with Article 7.3.3 of the General Conditions, within seven (7) days following issuance of the Notice to Proceed, the Contractor awarded the Bid Package shall prepare and submit to the District Preliminary Baseline Construction Schedules reflecting all of Contractor’s proposed revisions and recommendations to the Bid Schedule while incorporating the requisite milestone completion dates set forth in these Special Conditions. Acceptance of Contractor proposed revisions and recommendations into the Baseline Construction Schedule will be done at the sole and exclusive discretion of the District. The Contractor shall notify the District, in writing, in the event that the Contractor has no proposed revisions or recommendations to the Bid Schedule. Contractor’s failure to timely submit a Preliminary Baseline Construction Schedule shall be deemed as to have acquiesced and agreed to the Bid Schedule. Furthermore, Contractor’s failure to timely submit a Preliminary Baseline Construction Schedule shall be deemed a waiver of Contractor’s right to establish and submit a Proposed Milestone Completion Schedule. The District shall thereafter establish the milestone completion dates for that Bid Package and incorporate the Bid Schedule into the Baseline Construction Schedule.

**6.3. Completion of a Milestone.** Each milestone shall be deemed completed on the date the Project Inspector and/or District Representative executes the Contractor’s Request for Inspection acknowledging that the Work has been satisfactorily completed in accordance the Contract Documents.

**6.4. Contractor Liability for Delays.** The Contractor is responsible for prosecuting the Work of its Bid Package in accordance with the then most current Baseline Construction Schedule or Updated Construction Schedule. In addition to Liquidated Damages liability, the Contractor for the Bid Package shall be liable for:

- a. All costs, expenses or other charges (including direct, indirect, and/or administrative) incurred by Contractor in furnishing such materials, labor,

- equipment or services necessary to recover and/or maintain progress of the Work in accordance with the then current Construction Schedule; and
- b. Costs, losses, expenses, damages, claims or other demands asserted by the Contractor or its Subcontractors for the General Building Bid Package (“Other Contractors”) whose progress is delayed, interrupted, hindered or otherwise impacted by the Contractor’s failure to complete the Work of the Bid Package in accordance with the then most current Construction Schedule.

The obligation of the Contractor and the Contractor’s Performance Bond Surety to defend, indemnify and hold harmless the Indemnified Parties, as set forth in Article 6.8 of the General Conditions, shall be deemed to include requests for equitable adjustment, claims, demands, actions, causes of actions or proceedings initiated by Other Contractors based in whole or in part on the delays of the Contractor in completing the Work of the Bid Package, or portions thereof, in accordance with the then most current Construction Schedule.

**7. Liquidated Damages.** Prior to bidding and as part of the Bid Package, the District will establish a master CPM schedule (the “Bid Schedule”) for completion of the Work of General Contractor to meet the final completion date of the entire Project required by Owner. The Bid Schedule shall establish the following: (a) final completion date required by Owner for the Bid Package; and (b) milestone dates for the Contractor’s incremental activities within the Bid Schedule, including but not limited to Submittals, Tasks and Closeout Documents. Contractor shall be liable for and shall forfeit and pay to the District as Liquidated Damages, and not as penalty the sums as set forth in Article 9, for the Contractor’s failure to meet (1) the overall Bid Package completion date; and (2) the date for completing work on any Milestone of the Bid Package. The Liquidated Damages shall be assessed for the Contractor’s failure to meet the above; dates are cumulative and continue until all of Work of a Milestone is completed or Final Completion of the Work is established by District and/or Owner’s Architect(s)/Consultant(s).

**8. Milestones.** In addition to the Contractor’s obligations to achieve Final Completion within the Contract Time, the Contractor shall commence/complete Milestones as described and set forth below. Failure of the Contractor to commence and complete Milestones pursuant to the following will subject the Contractor to Liquidated Damages liability to the District as set forth in these Special Conditions.

<b>Milestone Event</b>	<b>Milestone Date</b>
Owner Issues Notice of Award (NOA)	December 10, 2019
Estimated Notice to Proceed (NTP) (*note 2)	December 23, 2019
Estimated Completion of Work (*note 3)	August 19, 2020

*\*Notes*

1. *NTP date is first date available for contractor begin site work.*
2. *Date reflected is 13 calendar days following NOA.*
3. *Date reflected is 240 calendar days following NTP.*



**Building Accessibility & Permitted Hours of Work**

**All Buildings on Visalia Campus:**

Monday	3:30 PM through 11:30 PM
Tuesday	3:30 PM through 11:30 PM
Wednesday	3:30 PM through 11:30 PM
Thursday	3:30 PM through 11:30 PM
Friday	3:30 PM through 11:30 PM
Saturday	8:00 AM through 6:00 PM
Sunday	8:00 AM through 6:00 PM

**NOTES:** It is the responsibility of the Contractor to facilitate the necessary resources to meet the specific schedule restrictions noted above. Contractor’s Bid shall be inclusive of any extra costs for such resources, including additional labor, equipment and/or extended work hours, weekend hours, holidays, etc. Contractor shall notify the District in advance if planning to work outside of the allowable work hours/days at the Site - see Project Manual (Special Conditions, Article 13. Hours/Days of Work at Site) for additional information.

**9. District Withhold of Liquidated Damages; Performance Bond Surety.** If the Contractor fails to complete Milestones within the time established herein or achieve Final Completion of the Electrical Bid Package within the time established herein, the Contractor shall be subject to assessment of Liquidated Damages. The District may withhold such assessments from the Contract Price then or thereafter due the Contractor. If the assessment of Liquidated Damages exceeds the then remaining balance of the Contract Price, the Contractor and the Surety issuing the Performance Bond shall be jointly and severally liable to the District for such amounts. Liquidated Damages are as follows:

**Milestone Event / Liquidated Damages**

Final Owner Acceptance:

- Liquidated Damages: Five Hundred Dollars (\$500) per day after established Final Owner Acceptance date.

**10. Progress Payment Applications.** At least fifteen days before the date established for each progress payment, the Contractor shall submit to the District a Draw Request (G703) on which both District and Contractor shall agree as to the appropriate payment for work completed in accordance with the Schedule of Values. Upon agreement of Draw Request (G703), Contractor shall submit to the District Application for Certification of Payment (G702). Such application shall include approval signature from the Project Inspector and shall be notarized, if required.

**11. Mark-Ups on Changes to the Work.** In the event of Changes to the Work, pursuant to Article 9 of the General Conditions, the mark-up for all overhead (including home and field office overhead), general conditions costs and profit, shall not exceed the percentage of allowable direct actual costs for performance of the Change as set forth below. For the portion of any Change performed by Subcontractors of any tier, the percentage mark-up on allowable actual direct labor

and materials costs incurred by all Subcontractors of any tier shall be ten percent (10%). In addition, for the portion of any Change performed by a Subcontractor of any tier, the Contractor may add an amount equal to five percent (5%) of the allowable actual direct labor and materials costs of Subcontractors performing the Change. For the portion of any Change performed by the Contractor's own forces, the mark-up on the allowable actual direct labor and materials costs of such portion of a Change shall be fifteen percent (15%). In addition to the foregoing provisions of this Paragraph, Contractor may add a bond premium fee equal to the lesser of its actual bond premium percentage or one percent (1%) of the actual direct costs for performance of the Change.

**12. Modifications to General Conditions Article 4.14.** Contractor need not provide any temporary facilities for use by the Project Inspector; the District will provide temporary facilities for use by the Project Inspector.

**13. Hours/Days of Work at Site.** The District facilities in and about the Site will be occupied between 6:30 a.m. and 10:00 p.m. Mondays through Fridays and 6:30 a.m. and 6:00 p.m. on Saturdays. During construction, at the conclusion of each day of work, the Contractor will be allowed to section off enough working area, with Owner approved barricades, to allow access for the following day's work. No adjustment of the Contract Time or Contract Price will be permitted on account of the District's use or occupancy of the site and/or parking facilities. **Construction activities shall be conducted between 3:30 p.m. and 11:30 p.m. Monday through Friday and Saturday through Sunday 8:00 a.m. through 6:00 p.m.** unless noted otherwise in the Contract Documents - see Project Manual (Special Conditions, Article 8. Milestones) for building accessibility details, specific permitted hours of work and Project Schedule requirements. During performance of the Work on the project, Contractor shall not interfere with the normal, regular, or existing business operations or activities of Owner at the site. No Work at the Site is permitted except during such days and hours.

**14. Parking.** Limited parking will be available within the perimeter of the Site without cost or charge to the Contractor, on a first-come, first-served basis. Contractors are encouraged to only bring vehicles identified with company markings inside the construction perimeter. Additional parking is available in District parking lots subject to the daily parking charges and compliance with District parking lot rules and regulations. Temporary parking permits may be obtained at the Facilities Office. District Police will ticket any vehicle without a valid parking permit located outside of the designed construction area. No adjustment of the Contract Time or the Contract Price shall be allowed on account of limited parking within the Site or for parking in the District's parking lots.

**15. Discovery of Archeological Resources.** If, during the Work, the Contractor encounters materials which are or may be an Archeological Resource (as that term is used and defined in California Public Resources Code §21083.2), the Contractor shall take action as set forth herein.

- 15.1. Contractor Responsibility.** Upon encountering such materials, the Contract shall:
- a. Immediately cease Work and any other activity which will or may result in disturbances of the area(s) where such materials are encountered;
  - b. Immediately notify the Consultant, Project Inspector and District in writing of the encountering of such materials; and

- c. Take appropriate measures, including any directed or authorized by the District to cordon-off the area(s) in which such materials are encountered to prevent access to, and further disturbance of such area(s), pending determination of whether such materials are Archeological Resources and direction from the District regarding resumption of Work in such area(s).

- 15.2. District Investigation.** Upon receipt of such written notice from the Contractor, the District shall promptly investigate and determine whether the materials encountered constitute Archeological Resource(s), and if so, whether such materials are Unique or Non-Unique Archeological Resources. Upon completing such investigation, the District shall notify the Contractor in writing of the results of such investigation, along with direction for resumption of the Work or further suspension of the Work in such area(s), pending completion of archeological mitigation measures.
- 15.3. Contractor Continuation of Work.** If it is determined that the materials are not Archeological Resources or are Non-Unique Archeological Resources (as that term is used and defined in California Public Resources Code §21083.2(h)), the District shall notify the Contractor in writing of such conclusion. Upon receipt of such notice from the District, the Contractor shall immediately resume the Work in the area(s) where potential Archeological Resources were encountered. If it is determined that the materials are Unique Archeological Resources (as that term is used and defined in California Public Resources Code §21083.2(g)), the District shall notify the Contractor in writing of such conclusion. In such event, the Contractor shall defer further Work in such area(s) pending the District's completion of archeological mitigation measures and direction or authorization from the District to resume Work in such area(s).
- 15.4. Adjustment of Contract Time for Encountering Actual or Potential Archeological Resources.** If the Contractor encounters materials which are or may be Archeological Resources and the Work is suspended pending the District's investigation of such materials to ascertain whether or not such materials constitute Archeological Resources and the suspension of Work in such area(s) directly delays performance of activities on the Critical Path of the then current Master Project Schedule, such suspension of the Work shall be deemed an Excusable Delay (as that term is used and defined in Article 7.4.1 of the General Conditions). The Contractor shall be entitled to an adjustment of the Contract Time to the extent that the Contractor's Critical Path activities are delayed by such suspension. The Contract Price due the Contractor shall not be subject to increase or other adjustment on account of suspension of Work as a result of encountering materials which are or may be Archeological Resources.
- 15.5. Adjustment of Contract Time for Encountering Archeological Resources.** If the Contractor encounters materials which are determined to be Unique Archeological Resources and the Work is suspended pending the District's archeological mitigation activities and the suspension of Work in such area(s) directly delays performance of activities on the Critical Path of the then current Master Project Schedule, such suspension of the Work shall be deemed an Excusable Delay (as that term is used and defined in Article 7.4.1 of the General Conditions). The Contractor shall be entitled

to an adjustment of the Contract Time to the extent that the Contractor’s Critical Path activities are delayed by such suspension. The Contract Price due the Contractor shall not be subject to increase or other adjustment on account of suspension of Work as a result of encountering materials which are determined to be Unique Archeological Resources.

**15.6. Adjustment of Contract Price.** The extent to which, if any, the Contract Price due the Contractor is subject to adjustment as a result of encountering actual or potential Archeological Resources shall be limited as set forth herein. Adjustment of the Contract Price shall be limited to activities necessary to secure the area(s) in which actual or potential Archeological Resources are encountered from further access or disturbances. The extent of adjustment of the Contract Price shall be limited to the allowable costs and mark-ups thereon for Changes to the Work, as set forth in the Contract Documents.

**15.7. Contractor Continuation of Work in Other Areas.** The foregoing provisions shall not excuse nor limit, waive or modify the Contractor’s obligation to diligently proceed with performance of Work in all areas of the Site unaffected by the encountering of materials which may be Archeological Resources.

**16. Permits, Fees and Approvals.** Permits, fees and approvals necessary to complete the Work will be obtained and paid for by the District.

**17. Standardized Forms.** Each and every document generated and/or submitted by the Contractor relating to cost breakdowns, applications for payment, change order requests, requests for information, submittals, verified reports, progress reports, and all other matters relating to the administration of the Work as set forth in the General Conditions, shall be prepared by the Contractor on such forms as may be directed by the COS District. Unless otherwise expressly provided for in the Contract Documents, all such documents shall be submitted to the District with such frequency as the District may require in its sole reasonable discretion.

**18. Injury and Illness Prevention Plan.** Contractor shall comply with, and require its subcontractors to comply with, the Cal/OSHA Injury and Illness Prevention Plan set forth in Title 8 of the California Code of Regulations Sections 3203 and 1509, including, without limitation, conducting “toolbox” or “tailgate” safety meetings, or equivalent, with their crew at least every 10 working days to emphasize safety.

**19. Safety Programs.**

Article 4.9.1 of the General Conditions is modified by addition of the following:

**4.9.1.1 General Safety Provisions.** Contractor will develop and implement a construction safety program in accordance with District’s site rules and security requirements and the Williams-Steiger Occupational Safety and Health Act of 1970 and California Code 1 Regulations, Title 8 (Cal/OSHA) as may be amended and including all regulations adapted pursuant thereto in effect at the time of delivery or performance of service. In case of conflict between the documents the Williams-Steiger Act and Cal/OSHA shall be controlling.

The Contractor will be solely responsible for all safety aspects of the work under the Contract. The Contractor will be responsible for ensuring that all its Subcontractors, of any tier are familiar with, fully trained in, and comply with all safety provisions.

The Contractor will at all times maintain a constant vigil for accidents and will prepare and submit to District's representative a written report for any accident, illness, or injury requiring outside medical attention. This report shall contain all data pertinent to the accident (time, place, description of accident, personnel involved, type of injuries, etc.) and shall be submitted within 5 working days. In lieu of a formal report the Contractor may substitute the required Cal OSHA form. Contractor will also notify College of the Sequoias District Police using (559) 730-3999 immediately after an accident, illness or injury has occurred.

At the conclusion of the project, Contractor will submit to District a statement confirming the status of any accident and a release of liability holding District and the Owner harmless against any future claims.

**4.9.1.2 Contractor's General Safety Provisions, Site Rules & Security Requirements.** Unless notified otherwise, the following rules shall be considered the minimum required and shall be adhered to by General Contractor, their employees and visitors. Anyone violating these rules may be denied further access to the Site.

**4.9.1.2.1 Safety Materials and Inspection.** Jobsite "tailgate" meetings will be held weekly for Contractor's employees, temporary and permanent. Tailgate safety meetings are held for construction crews' benefit. Employees shall be required to attend the meetings and encouraged to participate and offer suggestions for improving safe work conditions and or practices. The Contractor foreman will make a daily safety inspection of the job-site, documenting activities on the Daily Jobsite Inspection Report provided. Any unsafe work conditions or unsafe acts by Contractor employees or subcontractor will be noted and immediate corrective action taken.

**4.9.1.2.2 Protective Clothing & Safety Equipment.** The Contractor and/or its personnel must wear appropriate safety clothing and use appropriate safety equipment. The instruction for proper use and maintenance of personal safety equipment and protective clothing is also the responsibility of the Contractor. This includes, but is not limited to, safety glasses, welding goggles, safety shoes, respiratory protection gear (in special cases), ear protection and hard hats, as described below.

Personnel shall wear approved hard hats at all times in construction areas.

Personnel shall wear proper footwear and/or safety-toed shoes or boots with substantial soles. Additional foot protection, such as rubber boots or steel-toed protectors may be required where there is exposure to special hazards.

Wear safety glasses, goggles or face shields whenever there is an exposure to injury from flying particles or splash. Eye protection is particularly required when grinding, cutting, chipping, welding or using air tools for such things as breaking concrete.

Use proper respiratory equipment whenever there is exposure to harmful dusts, fumes, vapors or gases.

Whenever personnel is working on foot and exposed to mobile equipment or motor vehicle traffic, personnel must wear orange flagger's vests or other equivalent high visibility orange apparel. If vests are used after dark, they must be of the reflective type.

Personnel shall wear protective gloves and boots whenever working with cement products, acids or chemicals.

Personnel must wear hearing protection such as plugs or muffs as directed or whenever exposure to noise exceeds 85 decibels. In general, if you need to shout in order to converse with a person close by, you should ask your Supervisor if ear protection is required.

**4.9.1.2.3 Personnel Behavior.** Smoking is prohibited on Sequoias Community College District property.

Control noise so as not to disturb or disrupt Owner, District or other Contractor Personnel. No radios or portable headsets will be permitted without prior approval.

The use or possession of intoxicating beverages or drugs on the jobsite or immediately prior to entering the job site is prohibited.

Do your part to help keep work areas clean and free of debris and other tripping hazards.

Firearms are not permitted on the job site, inside vehicles or equipment.

With safety issues in mind, keep a lookout for other persons and employees that come into the vicinity of your work area.

Only those Contractor vehicles actually required for delivery of equipment and materials or for the performance of necessary operations by the Contractor will be admitted to the site. The speed limit of five (5) mph will be observed. No personal vehicles are allowed.

All Contractor safety signs, notices and tags must be obeyed. The Contractor must display appropriate safety signs, notices and barriers when work is in progress that could be hazardous.

**4.9.1.2.4 Anti-Harassment Policy.** Harassment, creation of a hostile work environment or intimidation for the purpose of interfering with work will not be permitted. Anti-harassment policies and supervisory training will be conducted regularly to eliminate vulgar comments, demeaning comments, offensive graffiti or creation of sexually hostile work behavior.

**4.9.1.2.5 Hand and Portable Electric Tools:** Contractor and/or its personnel shall do the following:

- a. Always use the right tool for the job.
- b. Do not use defective tools or equipment.
- c. Report tools or equipment to your Supervisor that are broke or do not work properly so that they can be replaced with safe ones.
- d. Keep guards and safety devices in place and functioning properly.
- e. Inspect electric cords, plugs and receptacles before use and have them repaired or replaced if worn or damaged.
- f. Electric cords should not be spliced and taped. If portable electric service is provided to the job-site, each fifteen (15) and twenty (20) amps receptacle must have grounding contacts through a ground fault interrupter circuit, or an assured equipment ground conductor maintenance program in progress.
- g. Be certain that all electric hand tools and exposed non-current carrying parts of motors, generators (including portable units), and control equipment are properly grounded.
- h. Do not use the power cord to lift or lower portable electric tools since this practice can break internal wiring and cause electric shorts. All electrical equipment used is to be a type appropriate to the hazard classification of the area where work is to be performed and compiling with all applicable governmental standards and Contractor's maintenance procedures.

**4.9.1.2.6 Ladders.** All ladders, scaffolding and etc. must be OSHA and Cal/OSHA approved.

All trades performing work shall have and implement a fall protection plan suitable for the site, activities, height and other conditions. Guardrails are required to guard the open sides of all work surfaces that are seven and a half (7 ½) feet or higher. A personal fall restraint system, which consists of anchorages, connectors, body belt and harness, and may include lanyards, lifelines, and rope grabs, shall be used to prevent an employee from falling.

Ladders should be inspected before use. Well built, undamaged ladders of the proper size should be used and should be long enough that side rails extend three feet above the landing. Metal ladders should not be used when working on electrical equipment since the ladders conduct electricity.

Contractor and/or its personnel should always do the following when using ladders:

- a. All ladders should have safety feet in good condition.
- b. When setting the ladder, the base should be approximately one-fourth the length to its top support.
- c. Secure ladders from falling by setting feet properly and tying them off at the top to prevent them from sliding over.
- d. Face the ladder when going up or down and keep hands free of tools or materials.
- e. Always bring materials up ladder using a hand line.

**4.9.1.2.7 Scaffolds, Platforms and Safety Belts.** Contractor and/or its personnel shall do the following:

- a. Before using scaffolds or other work platforms, check them for security, proper planking and guardrails. They must conform to design standards or be designed by a licensed Consultant.
- b. Wood pole scaffolds must be tied every twenty (20) feet horizontally and vertically for light trades, and fifteen (15) feet for heavy trades. Metal scaffolds must be tied every twenty-six (26) feet vertically and thirty (30) feet horizontally. A permit from Cal-OSHA is required for a scaffold over thirty-six (36) feet high.
- c. Scaffold platforms must have guardrails on the open sides if over seven and a half (7-1/2) feet high. One set of "X" braces is sufficient if they intersect twenty (20) to thirty-six (36) inches above the platform. Toe boards are required where workers pass below. Access to scaffolds must be safe and unobstructed.
- d. Do not use single plank for ramp access to work areas. A ramp must be at least twenty (20) inches wide and have handrails if it is seven and a half (7-1/2) feet or more in height. Keep ramps and platforms clear of debris and unnecessary tools and material. When rolling scaffolds are used, height-to-base ratio must not exceed a 3:1 ratio, all wheels must be locked when in use, and work platform must be fully guarded. Rolling scaffolds should not be moved with someone on them.
- e. Approved safety belts with lifelines or lanyards must be worn when you are exposed to falls from heights that would otherwise require guardrails or other fall protection. When working on roofs, every effort should be made to protect from falls by safety belts/lifelines, or by safety nets if working above twenty-five (25) feet in height. If there is danger of falls on roof edges, guard lines can be installed forty-two (42) inches high and approximately five (5) feet from the edge to warn roofers before they get too close.

**4.9.1.2.8 Fire and Flammable Materials.** With respect to fire and flammable materials, Contractor and/or its personnel shall also do the following:

- a. All flammable liquids are to be stored only in approved closed metal containers, labeled FLAMMABLE.
- b. Keep combustible waste materials picked up and discarded regularly.
- c. Know the location and proper use of fire extinguishers and use only for firefighting.



- d. Use proper precautions when transferring fuel or refueling equipment. Stop motors, provide for grounding and bonding and do not smoke or allow open flames or other source of ignition in the area. Close containers tightly and eliminate any spillage. Remember that the vapors from flammable liquids can carry away from the liquid itself and are easily ignited.
- e. Oxygen and acetylene cylinders are to be secured upright and stored separately (at least twenty (20) feet apart or separated by a fire resistant wall at least six (6) feet high, and not near other combustible materials, particularly oil and grease). Protective caps should be kept in place when they are not in use.
- f. Never weld, burn or cut any containers that have held flammable liquids unless they are filled with water or are completely cleaned, ventilated and tested.
- g. Never use gasoline for cleaning purposes. Use only approved cleaning solvents, in well ventilated areas.
- h. All compressed gas cylinders must be stored in an upright position and secured against falling.

**4.9.1.2.9 Hazardous Substances.** Contractor and/or its personnel may be exposed to many different materials that have been determined to be hazardous substances if they are not handled in a safe manner. Contractor and/or its personnel shall know what information on hazardous substances is available and how to use it. Material Safety Data Sheet (MSDS) for each of the hazardous substance used shall be maintained on the job site by Contractor foreman. These are the rules when using hazardous substances:

- a. Never use any chemical or substance without reading the label or the MSDS.
- b. If you have questions or have not been instructed on the safe use of hazardous substances; seek clarification.

**4.9.1.2.10 Contractor Machinery & Equipment.** The Contractor shall not use District's equipment or tools. The Contractor must supply all such items necessary to complete the work of its trade. Contractor and/or its personnel shall do the following:

- a. Only operate, service or repair machinery or equipment that it is qualified to operate or service.
- b. Before operating any power-driven equipment or vehicles, make a careful Safety inspection. Any defects must be repaired before the equipment is operated.
- c. Before starting machinery or putting equipment in motion, make certain there will be no danger to other persons or property.
- d. The use of seat belts is required when operating motor vehicles or mobile earth moving equipment.
- e. Never service or repair machinery or equipment while it is in motion. Always lock-out machinery or equipment being serviced to prevent possible injury.

- f. When mounting or dismounting equipment, always use the stairs or ladder. Never try to jump off.
- g. Never ride any machinery, equipment, loads, or hooks unless in the seat provided by manufacturer or approved safety facilities or devices are used.
- h. Equipment must never be operated within fifteen (15) feet of energized high voltage electrical lines. Fifty-thousand (50,000) volts and higher voltage requires greater distances in accordance with State and Federal Safety Regulations.
- i. Always stay outside the area within the swing radius of rotating machines such as cranes, shovels, or a backhoe.
- j. All equipment must be safely parked and secured before it is left unattended, even for short periods of time. Particularly lower all forklift beams, blades, booms, buckets, etc. to the ground and secure from possible movement.
- k. When mobile equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

**4.9.1.2.11 Cranes.** Hazards associated with crane operation including electrocution from overhead power lines, equipment failures because of operator error, faulty or damages equipment, overloading or lack of support are to be avoided at all times. Workers must be thoroughly familiar with hand signals used for communication with the crane operator. Slings and attachment must not be kinked, shortened by knots, bolts or other means, and must be inspected on a daily basis for defects.

Aerial devices, such as cherry pickers, lifts, and boom trucks used to position personnel, must observe continuous safety precautions. Only authorized persons may operate aerial devices. Aerial devices must not rest on any structure, only solid ground. Controls must be tested before use. Workers must stand only on the floor of the basket. No planks, ladders, or other means are allowed to gain greater height. A fall protection system must be worn and attached to the boom or basket. Brakes must be set when employees are elevated. An aerial lift truck must not be moved when an employee is on the elevated boom platform.

Contractor and/or its personnel shall do the following:

- a. The crane operator must be in good condition physically, mentally, and emotionally in order to maintain complete control of the crane at all times.
- b. Before starting the crane do a pre operational inspection. This inspection is to be documented in writing on the daily inspection and maintenance log, and initialed by the inspector.
- c. Be mindful of specific jobsite restrictions, such as the location of overhead electric power lines, unstable soil, and high wind conditions.

- d. To prevent employees from being struck or crushed by the crane, barricade accessible areas within the swing radius of the rear of the rotating superstructure.
- e. Never work under a suspended load. When a load is being picked up or set down, it may shift, swing, or pivot, or a loose piece may even fall off; make sure that you keep far enough back to accommodate the dangers. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped to provide adequate protection for the operator during loading and unloading operations.
- f. Crane operators must avoid swinging loads over persons and should keep people away from loads when possible.
- g. Crane attachments cannot exceed the capacity, rating, or scope recommended by the manufacturer. Operators must be knowledgeable of and operate within crane capacities and limitations. If the operator does not have a clear, unobstructed view of the entire lift, from beginning to end, a signal person must be assigned.

**4.9.1.2.13 Hazardous Atmospheres.** Never enter any confined space such as a trench, excavation, manhole, underground vault, tank, pipes, etc. without first determining if there is adequate ventilation and that there are no flammable or toxic gases. Then enter only with permission of your Supervisor and with proper safety devices such as a lifeline and another person standing by for help as necessary.

Testing and Controls: In addition to the requirements set forth in the construction Safety Orders and the General Industry Safety Orders to prevent exposure to harmful levels of atmospheric contaminants and to assure acceptable atmospheric contaminants and to assure acceptable atmospheric conditions, the following requirements shall apply:

- a. Where oxygen deficiency (atmospheres containing less than nineteen and a half percent (19.5%) oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation shall be tested before employees enter excavations greater than four (4) feet in depth.
- b. Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than nineteen and a half percent (19.5%) oxygen and other hazardous atmospheres. These precautions include proper respiratory protection or ventilation.
- c. Adequate precaution shall be taken such as providing ventilation, to prevent employee exposure to an atmosphere containing a concentration of a flammable gas in excess of twenty percent (20%) of the lower flammable limit of gas.
- d. When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable level, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.

- e. **Emergency Rescue Equipment:** Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended when in use.
- f. Employees entering bell-bottom pier holes, or other similar deep and confined footing excavations, shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials, and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

**4.9.1.2.14 Hazards Associated with Water Accumulation.** Contractor and/or its personnel shall do as follows:

- a. Not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect personnel adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.
- b. If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operations.
- c. If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person and compliance with provisions previously stated in Excavation, Trenches, and Earthwork.

**4.9.1.2.15 Stability of Adjacent Structures.** Contractor and/or its personnel shall do as follows:

- a. Where the stability of adjoining building, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of personnel.
- b. Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to personnel shall not be permitted except when:
  - i. A support system, such as underpinning, is provided to ensure the safety of employees and the stability of the structure; or
  - ii. The excavation is in stable rock; or
  - iii. A registered professional Consultant has approved the determination that such excavation work will not pose a hazard to employees.

- c. Sidewalks, pavements and appurtenant structure shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.

**4.9.1.2.16 Hazardous Conditions.** Maintain access to fire hydrants and fire alarm boxes at the work site. Hydrants, alarm boxes and standpipe connections shall be kept clear of obstructions and kept visible at all times. If visibility cannot be maintained, the Contractor shall provide clearly visible signs showing the location of the fire hydrant, fire alarm box, or standpipe connection.

Existing sprinkler systems are not to be shut down, restored, disconnected, or modified without authorization by Contractor. Sprinkler pipes are not to be used as supports or as grounds for welding equipment.

No open flames, welding, cutting, open electrical equipment, or other spark-producing equipment will be operated within the site or buildings without proper precautions. The Contractor shall bear total responsibility for ensuring that proper precautions are taken.

Control at all times any fumes and/or vapors emitted by material used so as not to create a health hazard, interfere with, or be noticeable by Owner, Contractor or the personnel of other Contractors.

Contractor shall control dust in such a manner so as to not cause an impact or interfere with other work, systems, or operations.

Contractor will be responsible for insuring that all open holes, open ledges, etc. are protected from accidental entry by providing physical barriers in accordance with OSHA and Cal/OSHA standards.

**20. Safety.**

Article 4.9 of the General Conditions is modified by addition of the following:

**4.9.8 Protection and Safeguarding the Work.** Contractor shall provide such lights, barricades, guardrails, posted signs, and other protective measures as may be required for the safe operation of the work or as directed by governing authorities.

**21. Safety.**

Article 4.9 of the General Conditions is modified by addition of the following:

**4.9.9.1 Work Area.** Contractor personnel are permitted only in the specific areas where their work is being done; travel through other parts of the building and site is prohibited except as necessary to reach the work site. Use of District's office, office equipment and toilet is prohibited. The project site will have limited space available for storage of materials. The Contractor and District's representative will prearrange

all construction areas, storage areas, etc. prior to start of work. The District shall allocate space at the Site for storage and staging by the Contractor. The District's decision regarding allocation of Site space for storage/staging are final and shall not result in any adjustments of the Contract Time or the Contract Price for any Contractor.

**4.9.9.2 Fork Lift, Hand Jacks and Construction Equipment.** Under no circumstances should anyone other than a properly trained and certified person operate a forklift. Drivers must be sure that there is clear visibility in all directions before driving. The riding on equipment except in the seat provided by the manufacturer is strictly prohibited.

**4.9.9.3 District Machinery & Equipment.** The Contractor shall not use District machinery, equipment or tools. The Contractor must supply all such items necessary to complete the job.

**4.9.9.4 Flammable Material.** No flammables shall be stored or left unattended in any of the buildings or structures.

**4.9.9.5 Electrical Equipment.** All electrical equipment used is to be a type appropriate to the hazard classification of the area where work is to be performed and compiling with all applicable governmental standards and District's maintenance procedures.

**22. Use of Site.**

Article 4.11 of the General Conditions is modified by addition of the following:

**4.11.1 Storage of Materials.** District will assign to Contractor allowable areas at the Site for the storage of materials and equipment. Contractor shall keep his materials and equipment strictly within the limits and areas assigned by District. Items stored pursuant to the foregoing shall cause no obstruction and shall be stored off sidewalks, roadways and underground services and utilities. Contractor shall be responsible for protecting his materials and equipment inside secured and locked storage containers.

**23. Clean-Up.**

Article 4.12 of the General Conditions is modified by addition of the following:

**4.12.1 Removal of Surplus Materials and Waste.** At the end of each work day, Contractor shall remove all surplus equipment, materials, construction debris, waste and rubbish of every sort, and leave the Site in a clean, neat, orderly and safe condition. Contractor shall dispose of removed lighting ballasts and fixtures in a legal manner and provide the District with a manifest.

**24. Record Drawings.**

Article 1.19 of the General Conditions is modified by addition of the following:

**1.19.1 Project Closeout.** Record Drawings shall be reviewed and approved by the Project

Inspector and/or District representative prior to consideration for Final Acceptance of the Work by the District. Contractor shall provide the District with two (2) full-size color copies of the Record Drawings and a scanned digital file (PDF saved on CD or memory stick). This requirement must be fulfilled by the Contractor before Notice of Completion can be filed for the Project.

**25. Addition or Deletion of Alternate Bid Item(s).**

Article 9.4.3 of the General Conditions is modified by addition of the following:

**9.4.3.1 Definition of Alternate Bid Item.** Alternate Bid Item: An Amount proposed by Bidders and stated on the Bid Proposal form for certain work defined in the Bidding Requirements, Specifications and/or Drawings that may be added or deducted from the Base Bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. The cost or credit for each Bid Alternate Item is the net addition to or deduction from the Contract Sum to incorporate Alternate Bid Item(s) into the Work. No other adjustments are made to the Contract Sum.

**9.4.3.2 Bidding Requirements for Alternate Bid Item(s).** Provide all material, labor, equipment and services necessary to completely install or remove all materials, accessories and other related items necessary to add or delete from the Project as indicated by the Bid Alternate Items in the Contract Documents. When Deductive Alternates are incorporated into the Contract, any services, such as utilities, that are meant to pass through the Deductive Alternate areas that serve other areas of the Base Bid Work shall be maintained as part of the Base Bid whether indicated or not.

**9.4.3.3 Quality Assurance.** Contractor shall execute accepted Bid Alternate Item(s) under the same conditions as other Work of the Contract.

**26. Daily Progress Reports.**

Article 4.20 of the General Conditions is modified by addition of the following:

**4.20.1 Weekly Progress Reports.** Upon prior approval by District, Contractor may substitute the daily progress report requirement by providing District with a weekly progress report identifying the work completed in the prior week and a projection of work to be completed in the current week. The report may be submitted via email to the Purchasing Department (Attn: Ashley Collins) not later than 12:00 p.m. of each Monday during the duration of the Project.

[End of Section]

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**BID PACKAGE – 1534  
SCOPE OF WORK****Structured Cabling Upgrade, Visalia Campus****SPECIFICATION SECTIONS:**

Section 27 00 00 Telecommunication Systems  
Section 27 05 28 Communication Raceway Systems  
Section 27 10 00 Structured Cabling System

**SPECIFICALLY INCLUDED SCOPE:**

The following documents the Scope of Work to be performed for the College of the Sequoias (COS), here after referred to as Owner, Bid# 1534 - Structured Cabling Upgrade, Visalia Campus project. Contractor will be responsible for the completion of all tasks listed in this “Scope of Work”, “Project Documents”, and the “Specifications”. Contractor’s price will include all work as listed on the aforementioned documents to provide a complete and operable solution. It is the responsibility of the Contractor to submit a complete and qualified bid. If the Contractor feels that the system described is incomplete, they must address their specific concerns in writing to the Owner before submitting a bid.

Contractor will be responsible for all work as described in the “Scope of Work”, “Project Documents”, “Specifications” and “Drawings”. It is the responsibility of the Contractor to bid a complete and operable solution. If the bidder feels that the system described is not complete, the Bidder will must address their specific concerns in writing to the Owner before submitting a quote. The Owner will not be responsible for additional costs incurred by the bidder due to the submission of an incomplete bid.

**STRUCTURED CABLE**

College of the Sequoias requires new data cabling to be installed in selected areas of its campus. All new Category 6 cable must be installed per the locations shown on provided drawings. New Intermediate Distribution Frame (IDF) cabinets will be built using a wall mount data cabinet that will be provided and installed by the contractor.

New 12 strand multi-mode fiber will be installed from Monache Building’s IDF to Blue Oak Building’s IDF. New 12 strand multi-mode fiber will also be installed from Tule Building’s IDF to Blue Oak Building’s IDF. New cabinets, termination hardware and shelves will be required in selected locations

Cat6 cable will be installed into new contractor supplied patch panels to be located into the new and/or existing cabinets per the attached specifications.

All installed cable is to be concealed. The contractor will supply necessary pathways, conduit, raceway, jacks and faceplates. Cable management will be performed by contractor at all equipment locations. All management ties used on cabling between patch panels and switches must be reusable Velcro based Category 6 cable ties.

**INCLUDED IN THE CONTRACTOR'S SCOPE**

The following Items are included in the Contractor's Scope of Work for this Project:

1. Provide and Install new backboard, cabinet and hardware for IDF's.
2. New Category 6 cable will be installed to each designated campus locations.
3. New Category 6 cable to each designated location from equipment cabinets/racks.
4. New twelve (12) strand multi-mode fiber installed to/from designated campus locations.
5. Two (2) new patch cables will be provided with each Cat6 cable outlet installed.
6. Four (2) new patch cables will be provided with each fiber cable installed.
7. All necessary site conduit and pathway systems, including; trenching, conduit, and/or pull boxes, stubs, J-hooks, surface mount raceway, and surface mount boxes required for the new cable.
8. Provide all fiber and copper patch cords, as specified in the construction documents.
9. Provide Testing, labeling, and warranties as specified in the construction documents.
10. Coordination with district upgrade schedule for demo and removal of replaced cable.

**EXCLUDED FROM THE CONTRACTOR'S SCOPE**

The following Items are excluded from the Contractor's Scope of Work for this Project and will be provided by others:

1. District will be responsible for providing sufficient power to equipment cabinets.

**IDENTIFICATION BADGES**

Contractor will be required to use "Identification Badges" for all employees, including subcontractor's working on behalf of the Prime Constructor, who will be working on site. Identification Badges will include, at a minimum, the following:

1. Photo of Individual.
2. First and Last Name.
3. Name of the Contractor who employs the individual.

**PROJECT SCHEDULE**

The Owner will supply the Contractor with a current "Class Schedule" at the time of the "Notice to Proceed". Contractor will submit to the Owner's Project Manager, for approval, a Project Schedule within ten (10) days of the Notice to Proceed. Contractor will submit the Project Schedule directly to the Owner's Project Manager for review and approval. The schedule will be returned to the contractor by the Owner's Project Manager as "approved", or "revise and resubmit" or "rejected". It is the contractor's obligation to coordinate with the Owner's Project Manager to develop an "Approved" Project Schedule.

The project duration, defined by the "Start Date" and "Completion Date" as shown on the Notice to Proceed and in this document, will be strictly adhered to. The approved schedule will be the basis by which Liquidated Damages, as set forth in the Special Conditions, will be assessed.

The project schedule shall be graphical in nature and contain specific project milestones that match the scope of work as specified in the project documents. The schedule shall provide for “early” and “late” start/end dates for each milestone, and include sufficient time for testing, inspections and corrective work. Contractor shall employ the “critical path” method when developing the project schedule.

It is the contractor’s responsibility to provide sufficient qualified personnel to complete the project within the specified time. The contractor, at their own expense, is expected to employ any means necessary, such as, overtime or working Saturdays to compete their work on schedule. Access to the site for overtime and Saturday work will be coordinated with the Owner’s Project Manager.

**SYSTEM CUT OVER**

It will be the Contractor’s responsibility to ensure the seamless transition during the installation of the new cabling systems.

Contractor will include in their bid price the cost to provide the Owner with **“No Disruption of Service”**. “No Disruption of Services” for this project will be defined as: The Owner will not endure any loss of system functionality for the systems defined in this project’s scope of work. It will be the Contractor’s responsibility to notify the Owner’s Project Manager in writing 48 hours prior to any building and/or panel cutover for approval.

In the event that the Contractor causes a “Disruption of Service” the Contractor will be assessed a fine of \$50 per hour for the Owner to provide contracted onsite Security Personnel to monitor the security of the affected areas. It will be at the Owner’s sole discretion to determine that Services have been successfully restored.

**END  
SCOPE OF WORK**

**27 0000 – COMMUNICATIONS GENERAL****Part 1 General****1.1 Related Sections****A. General**

1. This specification section provides general conditions for all division 27 specifications. All contractors working within the division 27 specification shall adhere to this specification.
  - Section 27 0258 – Communication Infrastructure Systems
  - Section 27 1000 – Structured Cabling System

**1.2 Statement of Work****A. General**

1. This document describes the requirements for the contractors, products, and installation relating to furnishing and installing the described low voltage systems.
2. The Contractor will provide a bid including all labor, materials, tools and equipment required for the complete installation of work called for on the Construction Drawings and described in the specification sections. It is the responsibility of the Contractor to provide all material necessary to provide a complete and operable system. If the Contractor feels that the system described is incomplete, they must address this in writing to the Owner's Representative before providing a bid.
3. All questions concerning non-specified products and services will be addressed to the Owner's Representative before the Contractor provides a bid. The Owner expects that by accepting the Contractor's bid proposal that the Contractor has provided a competent bid for a complete solution.
4. Product specifications, general design considerations, and installation guidelines are provided in this document. Typical installation details, and mounting details are provided in the Construction Drawings. The successful vendor shall meet or exceed all requirements for the systems described in this document.

**Part 2 Regulatory References****2.1 The Contractor will comply with the following:****A. Federal:**

1. National Electrical Code (NEC) 2008 or latest approved
  - Chapter 8: "Communications Systems"
  - Article 250: "Grounding"
2. NFPA 70 – National Electric Code
3. FCC – Part 15, Part 68
4. ADA – Americans with Disabilities Act

**B. State of California**

1. CCR, Part 2 – California Building Code
2. CCR, Part 3 – California Electrical Code
3. Occupational Safety and Health Act (OSHA)
4. Title 24, Building Standards, State of California
5. Title 19, California Code of Regulations
6. Title 8, Electrical Safety, State of California

**C. ANSI Standards**

1. ANSI C2-2001 National Electrical Safety Code

2. ANSIC80.3 Specification for Zinc-Coated Electrical Metallic Tubing
3. ANSI/UL 797 Electrical Metallic Tubing
4. ANSI/CEA S-83-596-2001 – Fiber Optic Premises Distribution Cable Technical Requirements

D. Industry Standards

1. Telecommunications Industry Associations/Electronics Industry Association (TIA/EIA)
2. ANSI/TIA-568-C Commercial Building Telecommunications Cabling Standard
3. ANSI/TIA -568-C.1 General Requirements
4. ANSI/TIA -568-C.2 Balanced Twisted Pair Cabling Components Standard
5. ANSI/TIA -568-C.3 Optical Fiber Cabling Components Standard
6. ANSI/TIA-569-A Commercial Building Standard for Telecom Pathways and Spaces
7. ANSI/TIA-606-C Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
8. TIA-607 Commercial Building Grounding/Bonding
9. ANSI/TIA -758-A Customer Owned Outside Plant Telecommunications Cabling Standard
10. TIA/EIA-758-1 Addendum No. 1 to TIA/EIA-758, Customer Owner Outside Plant Telecommunications Cabling Standard
11. National Electrical Manufacturers Association (NEMA)
12. Institute of Electrical and Electronic Consultants (IEEE)
  - 802.3 (Ethernet)
  - 802.3ab (Gigabit Ethernet over 4-pair Category 5e, 6 & 6A or higher)
  - 802.3Z (Gigabit Ethernet over Optical Fiber)
13. Underwriters Laboratories Inc. (UL)
14. International Organization for Standardization/International Electromagnetic Commission (ISO/IEC) ISO 11801 Generic Cabling for Customer Premises
15. Building Industry Consulting Services International (BICSI) Telecommunications Distribution Methods Manual (TDMM 14th Edition or latest)
16. ASCII – American Standard Code for Information Interchange
17. ASTM – American Society for Testing Materials

E. Conflict

1. If there is a conflict between applicable documents, then the more stringent requirement shall apply. All documents listed are believed to be the most current releases of the documents. The Contractor has the responsibility to determine and adhere to the most recent release when developing the proposal for installation.
2. This document does not replace any code, either partially or wholly. The Contractor must be aware of and comply with all local codes that may impact this project.

**Part 3 Contractor Requirements/Qualifications**

**3.1 Safety and Indemnity**

A. General

1. The contractor shall be solely and completely responsible for conditions of the job site, including safety of persons and property during performance of work.
2. The Contractor shall ensure that all personnel working in or anywhere on the site shall be provided a hard hat, safety shoes, a face shield or safety goggles, etc. for their protection.
3. No act, service, drawing review or construction observance by the Owner's Representative or any other party employed by the campus is intended to included review or approval of adequacy of the Contractor's safety measures, in, on or near the construction site.

### 3.2 Contractor Qualifications

#### A. General

1. Contractor shall have been in business for no less than five (5) years and have installed a minimum of three (3) projects of similar size and scope.
2. A *Manufacture Certified Installer* shall complete all System's installation. The Contractor shall have completed standards-based product and installation training. **A copy of the Contractor's Manufacture Certified Installed certificate shall be submitted with their submittal.**
  - Contractor must be at least a Panduit Partner One – Silver or above certification.
3. Sub-Contractor Qualifications
  - All Contractors shall submit a list of at least three (3) projects of similar dollar volume completed within the past 24 months for reference purposes.
  - The Contractor shall compile detailed information relating to similar work completed, including corporate references sufficient to enable the Owner to evaluate and agree to the Contractor' responsibility, experience and capacity to perform the work.
  - Each Contractor to perform telecommunications work on this project shall possess a C-10 or C-7. Limited Specialty License for Telecommunications and must be certified for installation, termination, splicing, and testing of copper cables, fiber optic cable, riser cable and inside wiring.
  - An on-site Contractor superintendent must be available at all times. Contact can be by person or telephone.
4. Contractors who do not meet the minimum requirements specified will not be accepted.

### 3.3 Quality Assurance

#### A. General

1. Contractors are required to comply with the following without exception.
2. The winning Contractor will assign this project to a competent Project Manager who has demonstrated their ability to supervise a telecommunications project of the same size and scope.
  - The Contractor will make this person available to the Owner/Owner's Representative before the start of this project for an interview. This person must be deemed acceptable by the Owner and/or their Representative before work can begin.
  - Project Manager will be required to be available for scheduled on-site project meetings at no additional cost to the Owner.
  - Project Manager will be required to be available to meet on-site with the Owner/Owner's Representative with a minimum of 24 hours' notice for non-emergency issues, and a minimum of 4 hours for emergency issues at no additional cost to the Owner.
3. All material and equipment to be installed on this project shall be "new". If the Owner/Owner's Representative discovers that "used" material or equipment has been installed on this project, the Contractor will be required to replace said materials and/or equipment with "new" products as no additional cost to the Owner.
  - "New" – Materials and products manufactured within one (1) year prior to installation, and meet or exceed the latest published specifications of the

manufacture. Also these materials and equipment may not have been in use before installation on this project unless directed otherwise in the project documents.

## Part 4 Documentation

### 4.1 Products

#### A. Pre-Approved Equals

1. All pre-approved products shall be listed in the relevant specification section.
2. Contractors wishing to approve a system other than those specified in this document will be required to perform the following:
  - Provide system specifications and cut sheets for all system components for the proposed new system(s).
  - Provide an itemized comparison to each of the system functions as described in this specification. Include in that document how the proposed system compares to the specified system described in this document on a line-by-line basis, using one of the following three criteria:
    - “exceeds”
    - “matches”
    - “unequal”

#### B. Other Products

1. All other products than those specifically addressed in the bid documents the Contractor is seeking approvals for must be **received** by the Owner’s Representative **no later than 15 business days before the bid date**. All Approved Equals will be published in addendum form prior to the bid date.
2. Failure to receive written approval for products installed that deviate from the products called for in the specifications and/or in the project drawings, will result in the Contractor replacing the unapproved materials and equipment with the originally specified products at no additional cost to the Owner.
3. All proposed system documentation must be sent to the Owner’s Representative via one of the following: mail, fax, or email. The Contractor will include the project name, their contact information, and the specification section number that the proposed system is comparable to.

### 4.2 Submittal Documentation

#### A. General

1. The successful Contractor shall provide their submittal package in accordance with Section 01 33 00 Submittal Schedule.

#### B. The Submittal Package will include:

1. All documentation given will be on a digital media device (USB thumb drive or CD/DVD)
2. A coversheet on the Contractor’s Company Letterhead including:
  - Contractor’s Name
  - Contractor’s License Number
  - The Project Name
  - The specification Number and Description
  - The date documentation was submitted.

3. A spreadsheet with a full material list of products, equipment and software included in the Contractor's bid price. The items on the spread sheet shall be in the same order as listed in the specifications. The spreadsheet will include:
  - Manufactures Name
  - Part Number
  - Description
  - Quantity to be installed for each part
4. A legible copy of the Manufacture's Catalog Cut sheet for each part included in the Contractor's Bid.
  - The catalog cut sheets shall be placed in the same order as shown on the spread sheet.
  - The catalog cut sheets shall have the specified part numbers clearly highlighted.
5. Copies of the Manufacture's Certification for a minimum of the Project Foreman and 50% of the installation crew.
6. The Contractor will provide a sample for each cable identifier to be used on the project. Labeling schemes can be found in the installation details.
7. When submitting multiple submittal sections for review, the contractor shall create digital bookmarks at each specifications section change. The digital bookmarks shall be easily identified and easily accessible through all standard PDF viewing software (i.e. Adobe, BlueBeam).

C. LEED/CHIPS/HPSA (when applicable to the project, provide additional submittal information)

1. Contractor will conform to all LEED document requirements as specified in the project manual

### 4.3 Acceptance

A. Project Acceptance

1. The Owner and the Contractor shall accept the project as complete based on the following criteria:
  - Before executing any performance testing, the Contractor shall present a test plan to the Owner's Representative for their approval.
  - The Contractor has completed all testing and delivered copies of all test resulting the Owner's Representative.
  - All test results have been examined and approved by the Contractor and Owner's Representative.
  - Copies of all documentation required by [close out documents section] have been delivered to the Owner's Representative.
  - All punch list items are to be completed to the satisfaction of the Owner, Owner's Representative, Architect, Consultant and Construction Manager.
  - Manufacturer Warranty Certification Certificates are provided to the Owner.
2. Following completion and/or compliance with the requirements listed above, the Contractor shall issue a Notice of Completion confirming that the project is complete. A 45-day acceptance period shall begin immediately following the issuance of the Notice of Completion.
3. Minor failures shall be responded to at the Owner's discretion or within one (1) business day.

### 4.4 Warranty



A. **Manufacturer Warranty**

1. The installed 27 1000 Structured Cabling (as applicable for given cable media) System, including both inter-building and intra-building sub-systems, shall be warranted by a manufacturer for a minimum of 15 years.
2. The warranty certified systems will be complete systems comprised of products from a single manufacturer for the entire channel (cords, outlets/connectors, cables, cross-connects, patch panels, etc.). The manufacturer shall administer a follow on program through the Contractor to provide support and service to the Owner. In the event that the certified systems cease to support the certified application(s), whether at the time of cutover, during normal use, or when upgrading, the manufacturer and Contractor shall commit to promptly implement corrective action.
3. The Contractor shall be responsible for correcting any problems and malfunctions that are warranty related for the entire warranty period. In the event that a Contractor should not be in business at the time of an issue, the manufacturer shall be responsible for all corrections, if deemed the responsible party.
4. Copies of an extended material warranties shall be passed through to the Owner.

B. **Contractor Warranty**

1. Contractor must warranty all materials, equipment and labor for a minimum of two (2) years from the Owner's Acceptance of the work.
  - Warranty will provide repair/replacement of all defective or improperly installed materials at no additional cost to the Owner (including labor, travel time/expenses, shipping, taxes, etc.).
  - Contractor is required to keep in stock replacement parts for all items covered in this specification and provide a competent service technician to be on site to repair/replace defective items no later than 24 hours after receiving a trouble call.
2. Warranty will cover normal business hours, 8am-5pm, Monday through Friday. All calls received on a Friday or the day before a holiday will be held until the following regular business day.
3. During the installation and up to the date of final acceptance, the Contractor shall protect all finished and unfinished work against damage and loss. In the event of such damage or loss, the Contractor shall replace or repair such work at no cost to the Owner or any other Trade Partnership working on the project.

**4.5 Close-Out Documentation**

A. **Structured Cabling**

1. Upon completion of the installation, the telecommunications contractor shall provide two (2) full documentation sets to the Owner's Representative for approval. One (1) to be a hard copy and one (1) to be an electronic copy. Documentation shall include the items detailed in the sub-section below.
  - Documentation shall be submitted within thirty (30) days of the completion of each construction phase. This is inclusive of all test results and draft as-built drawings. Draft as built drawings must include annotations of any changes to the original plans. Machine generated final copies of all drawings shall be submitted within thirty (30) calendar days of the completion of each testing phase. At the request of the Owner's Representative, the telecommunications contractor shall provide copies of the original test results.
  - The As-Built drawing are to include conduit routes, utility vault/pull box locations, surface mount enclosure locations, PVC to GRC transition points and the approved labeling identifiers. Numbering, icons, and drawing conventions

used shall be consistent throughout all documentation provided. The Owner will provide floor plans in paper and electronics (DWG, AutoCAD 2008) formats on which as built construction information can be added. These documents will be modified accordingly by the telecommunications contractor to denote as-built information as defined above and returned to the Owner.

- The Owner's Representative/Consultant can request that a 10% random field re-test be conducted on the cable system, at no additional cost, to verify documented findings. Tests shall be a repeat of those defined above. If findings contradict the documentation submitted by the telecommunications contractor, additional testing can be requested to the extent determined necessary by the Owner's Representative/Consultant, up to and including 100% re-test. Any re-tests shall be at no additional cost to the Owner.
- Test Result documentation shall be provided in two media, as listed above, one (1) hard copy and one (1) digital copy, within thirty (30) days after the completion of the project. The documentation shall be clearly marked on the outside front cover with the words 'Project Test Documentation', the project name and the date of completion (month and year). The results shall include a record of test frequencies, cable type, conductor pair and cable (or outlet) ID, measurement direction, reference setup, and crew member name(s). The test equipment name, manufacturer, model number, serial number, software version and last calibration date will also be provided at the end of the document. Unless the manufacturer specifies a more frequent calibration cycle, a bi-annual calibration cycle is anticipated on all test equipment used for this installation. The test document shall detail the test method used and the specific settings of the equipment during the test as well as the software version being used in the field test equipment.
- Printouts generated for each cable by the wire test instrument shall be submitted as part of the documentation package.
- When repairs and re-tests are performed, the problem found and corrective action taken shall be noted, and both the failed and passed test data shall be documented.

## END OF SECTION

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**27 0528 – Communications Pathways****Part 1 General****4.6 Statement of Work**

- A This document describes the requirements for the contractors, products and installation relating to furnishing and installing Underground Ducts and Raceway systems. All systems described herein shall be governed by the Division 26 specifications, should these two documents be in conflict the more stringent shall prevail.
- B The locations of vaults and pull boxes on the drawings are approximate and reflect the best information available. The Contractor is responsible for locating all existing utilities within the areas to be excavated prior to excavation. Final location of all trenches, communications utility vaults, and pull boxes must be verified and signed off on by the Owner/Owner's Representative.
- C The contractor shall furnish and install all work necessary to make complete systems, whether or not such details are mentioned in these specifications or shown on the drawings, but which are necessary in order to complete working systems, excepting those portions that are specifically mentioned therein or plainly marked on the accompanying drawings as being installed or supplied by others.

**4.7 References**

- D Regulatory References
  - Contractors will comply with all requirements as specified in Section 27 0000 '2.1 – Regulatory References'.

**4.8 Safety and Indemnity**

- E Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '3.1 – Safety and Indemnity'.

**4.9 Contractor Qualifications**

- F Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '3.2 – Contractor Qualifications'.

**4.10 Quality Assurance**

- G Contractors shall comply with all requirements as specified in Section 27 0000 '3.3 – Quality Assurance'.

**4.11 Equivalent Products**

- H All products described and part numbers given in this specification are those of Panduit and Cooper B-Line unless otherwise noted.
- I Pre-Approved Equals
  - 1 Utility Vault Company, Christy Concrete, BES
  - 2 Hoffman, B-Line, Circle AW
  - 3 Carlon, Allied Tubing, MaxCell
  - 4 RANDL Inc., Thomas & Betts, Bridgeport, Appleton, Erico, Minerallac
  - 5 Wiremold, Hubbell

- J Contractors wishing to approve a system other than those specified in this document shall do so in accordance with Section 27 000 '4.1 Equivalent Products'.

**4.12 Submittal Documentation**

- K The successful contractor shall provide their submittal package in accordance with the Section '01 20 00 – Submittal Schedule' and Section 27 0000 '4.2 – Submittal Documentation'.

**4.13 Acceptance**

- L The contractor shall comply with all requirements as listed in Section 27 0000 '4.3 – Acceptance'.

**4.14 Warranty**

- M The contractor shall comply with all requirements as listed in Section 27 0000 '4.4 – Warranty'.

**Part 2 Products**

**5.1 Pathways and Fittings**

**A Communication Underground Boxes**

**1 Communication Pull Boxes**

- Provide separate pre-cast concrete pull boxes, with lids labeled "communications" (for TV, telephone, data, security).
- Type equal to "Christy N16, N30, N40, N44" steel reinforced solid concrete box, concrete lid & 12" extension box shall be used. See project drawings for locations & additional requirements.
- Shall be constructed out of 3000 PSI steel reinforced concrete.
- Install on 6" gravel pad and provide drain. See project details for more info.
- Pull boxes in traffic areas and along roads shall be designed and installed for H20-44 loading.
- Pull boxes shall be located and provided with grade rings as necessary to ensure that water is drained from conduits.
- Pull boxes shall be installed to minimize surface drainage entry as follows:
  - Pull boxes should not be located in paths or streets. If such location cannot be avoided, pull boxes should not be located in low spots or drainage channels.
  - Pull boxes not located in paths or streets should be installed so that the top is approximately 2" above final grade.
- All pull boxes shall be installed with a mow strip minimum of 6". Refer to concrete installation specification for requirements.
- Non-slip lids shall be provided for pull boxes in sidewalk areas. Use concrete or fiberglass-no metal lids in sidewalks.
- Quantity: Contractor will provide pull boxes and covers in the sizes and quantities as shown on the drawings

**2 Communication Vaults**

- Provide separate pre-cast concrete vault, with lids labeled "communications" (for TV, telephone, data, intrusion alarm).
- Vaults shall be equipped with a cable racking on the long walls suitable to support large copper cables as called for on the design documents.
- Vaults shall include; Anchorage, Lifting Inserts and Racking Devices.

- All Vaults shall be equipped with traffic-rated lids with a locking mechanism. All lids shall have the identification marking of "Communications" permanently affixed to the cover.
- All pull boxes shall be installed with a mow strip minimum of 6". Refer to concrete specifications for installation requirements.
- Quantity: Contractor will provide vaults and covers in the sizes and quantities as shown on the drawings.
- Standard Vault size 24"x36"x36" equal to Old Castle 2436-STD
- Large Vault size 36"x60"x36" equal to Old Castle 3660-STD

3 Communication Vault Accessories

- UNDERGROUND CABLE RACK HOOKS
- Lite Duty Extension
  - Formed from 3/16-inch steel
  - Hot dipped galvanized per ASTM A123 / A153
  - Smooth top surface to protect cables from damage
  - Insulator 11A31 fits these hooks
  - Part numbers Inwesco or equal

Catalog Number	Extension from Face of Rack (inches)
10A35	4"
10A36	7-1/2"
10A37	10"
10A38	14"
10A39	18"

- Heavy Duty Extension
  - Formed from 10 ga. steel
  - Hot dipped galvanized per ASTM A123 / A153
  - Unique design locks hook into rack
  - Part numbers Inwesco or equal

Catalog No.	Extension from Face of Rack (inches)
10C38	14"

- J-Hook Cradle
  - Curved design to cradle cable
  - Available in fusion bonded epoxy coated steel
  - Available in injection molded ABS plastic
  - Steel used is 1/4 inch thick x 15/16 inch wide
  - ABS plastic hooks are 1-3/8 inch wide
  - ABS plastic hooks furnished with locking tab
  - Part numbers Inwesco or equal

Catalog No.	Type	Extension from Face of Rack (inches)
10A60	Coated Steel	2-1/2"
10B60	Plastic	2-1/2"
10A61	Coated Steel	5"
10B61	Plastic	5"

- 4 Surface-Mounted Entrance Cabinets Type 1 & 12
  - The Contractor shall provide a minimum of a NEMA 1 type enclosure that meets the UL 50, File No. E27567: Type 1 NEMA/EEMAC Type 1 CSA, File No. LL42184: Type 1 IEC 60529, IP30 standards for indoor applications.
  - The Enclosure shall be constructed from 16 awg galvanized steel, with a drip shield top and seam free side, front and back.
  - The Enclosure shall have a “slip-on” removable front cover held in place with steel screws.
  - Enclose shall incorporate pre-punched knockouts for standard trade size conduits up to 1”.
  - The size of cabinets mounted on an outside wall to serve a smaller building shall be as indicated on the construction plans.
  - Quantity: Contractor will provide boxes in the sizes and quantities as shown on the drawings.
- 5 Surface-Mounted Entrance Cabinets Type 3R and 4X
  - The Contractor shall provide a minimum of a NEMA 3R type enclosure that meets the UL 50 for outdoor applications.
  - The Enclosure shall be constructed from 16 awg galvanized steel, with a drip shield top and seam free side, front and back.
  - The Enclosure shall have a “slip-on” removable front cover held in place with steel screws.
  - Enclose shall incorporate pre-punched knockouts for standard trade size conduits up to 1”.
  - The size of cabinets mounted on an outside wall to serve a smaller building shall be as indicated on the construction plans.
  - Quantity: Contractor will provide boxes in the sizes and quantities as shown on the drawings.

**B Metallic Pull Boxes and Terminal Cans**

- 1 NEMA Type 1 – Screw Cover Cans
  - Used for indoor use only
  - NEMA/EEMAC Type 1, IEC 60529, IP30
  - UL 50, 50E Listed; Type 1; File No. E27525, cUL Listed per CSA C22.2 No 40; Type 1; File No. E27525
  - 16, 14 or 12-gauge steel or plated steel
  - ANSI 61 gray polyester powder paint finish inside and out.
  - Minimum size 6x6x4
  - Pre-Approved Sizes
  - Hoffman ASE6X6X4, ASE10X10X4, ASE12X12X4, ASE18X12X4, ASE18X18X4
  - Hoffman ASE6X6X6, ASE10X10X6, ASE12X12X6, ASE18X12X6, ASE18X18X6, ASE24X18X6, ASE24X24X6
  - Provide “NK” for No Knock-Outs as required.
  - Provide “AFE” Flush Covers as required.
  - Provide “AFDF” Flush Doors on all cans in user accessible areas IE; Data Closets, Electrical Rooms, Janitor Rooms, and Mechanical Rooms.
  - Provide “ACLFDF” Lock Kits for all cans in student areas.
- 2 NEMA 3R Terminal Cans
  - Used for outdoor use under-eave, breezeway or parapet
  - NEMA/EEMAC Type 3R, IEC 60529, IP32
  - UL 50, 50E Listed; Type 3R; File No. E27567, cUL Listed per CSA C22.2 No 94; Type 3R File No. E27567
  - 16-gauge galvanized steel
  - ANSI 61 gray polyester powder paint finish inside and out over galvanized steel.

- Minimum size 12x12x6
  - Hoffman A12R126HCR, A18R186HCR, A20R208HCR, A30R308HCR
- 3 NEMA 4 Terminal Cans
- Used for outdoor use vertical or Horizontal under-eave, breezeway or parapet
  - 16 or 14-gauge steel (see table)
  - Seams continuously welded and ground smooth
  - Stainless steel door clamps on three sides of door
  - ANSI 61 gray polyester powder paint finish inside and out over galvanized steel.
  - Minimum size 16x16x6
  - Hoffman A16H16ALP, A20H20ALP, A24H24ALP, A36H24ALP

C Conduit

- 1 Rigid Steel Conduit
- Rigid steel conduit shall comply with Underwriter's Laboratories UL-6 Specification, ANSI C80.1 and Federal specification WW-C-581E or latest revisions. Conduit shall be hot dip galvanized on the exterior, with zinc or enamel on the interior.
  - Couplings, locknuts, and all other fittings shall be galvanized or sheardized, waterproof and threaded type only. Rigid conduit shall terminate with two locknuts; one outside and one inside enclosures and specified bushings. No running threads or chase nipples shall be issued without approval.
  - Bushings shall be non-metallic for 1 inch and smaller and insulated metallic for conduits larger than 1 inch.
  - Galvanized rigid steel conduits (GRC) may be used in all locations. For underground runs in direct contact with earth, conduit shall be wrapped in 10mil PVC tape or shall be factory PVC-over-GRS conduit.
  - Intermediate metallic conduit (IMC) may be used indoor and outdoor locations, not underground.
- 2 Electrical Metallic Tubing (EMT)
- EMT conduit shall comply with Underwriter's Laboratories UL 797, ANSI C80.3 and Federal Specification WW-C-563 or latest revision. EMT shall be galvanized or sheardized.
  - Couplings and connectors for EMT shall be galvanized or cadmium plated and shall be of the compression type requiring the tightening of a nut on a gland ring. No die cast type shall be allowed. All connections shall have permanent insulated throats.
  - Electrical metallic conduit (EMT) may be used indoor and outdoor locations, not underground, not in areas subject to physical damage, not in concrete slabs, not in hazardous areas, not in masonry walls.
- 3 Schedule 40 PVC:
- The minimum conduit trade size allowed for this project will 2". Contractor will increase to the next higher trade size if conduit fill ration will exceed 40%.
  - Conduit shall be Carlon or equal, rated for use with 90° C conductors, UL Listed or approved equal. Material shall comply to NEMA Specification TC-2 (Conduit), TC-3 (Fittings) and UL 651 (Conduit) and 514b (Fittings).
  - Conduit and fittings shall carry a UL label (Conduit - on each 10-foot length; Fittings - stamped or molded on each fitting).
  - Conduit and fittings shall be identified for type and manufacturer and shall be traceable to location of plant and date manufactured. The markings shall be legible and permanent.
  - The Conduit shall be made from polyvinyl chloride compound (recognized by UL) which includes inert modifiers to improve weatherability and heat distortion. Clean rework material, generated by the manufacturer's own conduit production, may be used by the same manufacturer, provided the end products meet the requirements of this specification.



- The conduit and fittings shall be homogeneous plastic material free from visible cracks, holes or foreign inclusions. The conduit bore shall be smooth and free of blisters, nicks or other imperfections which could mar conductors or Cables.
  - Conduit, fittings and cement shall be produced by the same manufacturer to assure system integrity.
  - Testing and Acceptance Criteria: Conduit and fittings shall be tested in accordance with the testing requirements defined in NEMA TC-2, NEMA TC-3 and UL-651 and 514. The acceptance criteria shall be given in the same standards.
  - All conduit and fittings shall be solvent cemented in applications in accordance with instructions from the manufacturer.
  - Conduit Spacers
  - High impact spacers shall be used in all multi-conduit duct banks (five or more conduits). The spacers shall conform to NEMA TC-2, TC-6, TC-8, and ASTM F 512.
  - Spacers shall be installed and secured following the manufacturer's suggested guidelines or the BICSI CO-OSP Manual whichever is more stringent.
- 4 Pipe hangers for individual conduits shall be factory made, consisting of a pipe ring and threaded suspension rod. The pipe ring shall be malleable iron, split and hinged, or shall be interlocked with the suspension rod socket.
  - 5 Pipe racks for a group of parallel conduits shall be galvanized structural steel preformed channels of length as required, suspended on threaded rods and secured thereto with nuts above and below the cross bar. All offsets shall be in the same plane and shall be parallel.
  - 6 Factory made pipe straps shall be one-hole malleable iron or two-hole galvanized clamps.
  - 7 Manufacturer: Appleton, Crouse-Hinds, B-Line, Unistrut, T&B, or an approved equivalent product.
  - 8 Conduit Terminations and Plugs
  - 9 All conduits entering a vault or pull box shall be equipped with a bell-end securely attached to the structure.
    - All metal conduits shall be equipped with a bushing or end collar to protect cable during placement.
    - All unused conduits placed on this project or cleaned and modified by the Contractor shall be equipped with reusable rubber or plastic expansion seal plugs in all utility vaults/pull boxes and within all buildings.
  - 10 Conduit Flexible Type
    - Flexible conduit "Steel Flex or Aluminum Flex" may only be used for attic j-box to device connection, where specified in the project drawings or with consent of the owner/consultant representative.
    - Liquidtight flexible conduit may only be used where specified in the project drawings or with consent of the owner/consultant representative.
    - GRC & IMC fittings shall be galvanized rigid steel threaded type. Provide insulated grounding bushings at all enclosures.
    - EMT fittings shall be die cast or steel set screw type for dry locations, die cast or steel compression type for wet locations. Provide insulated grounding bushings at all enclosures.
    - PVC fittings shall be schedule 40 or schedule 80, provide adapters at all enclosures and transitions to GRC, IMC or EMT conduits.
    - Flexible fittings shall be die cast or steel type.
    - Liquidtight fittings shall be steel compression type.
    - Provide insulated screw on bushings on all conduit connections.
    - Provide insulated push on bushings for all stub-out conduits.
    - Quantity: Contractor will provide conduits in the sizes and quantities as shown on the drawings.
  - 11 Textile Innerduct - MaxCell
    - Made from White Polyester and Nylon resin polymer

- Standard Outdoor Textile Innerduct: Micro (33mm), 2-inch, 3-inch and 4-inch single or multi-cell polyester/nylon textile innerduct containing 1250lb polyester flat woven pull tape.
- Detectable Outdoor Textile Innerduct: Micro (33mm), 2-inch, 3-inch and 4-inch single or multi-cell polyester/nylon textile innerduct containing 1250lb polyester flat woven pull tape, and a solid copper, polyvinyl color coated conductor (19AWG minimum) for tracing and rated for a minimum of 6 amps and 600 volts. Conductor shall be placed in the sidewall edge fold of the textile sleeve.
- Indoor Textile Innerduct (Riser-listed): Micro (33mm), 2-inch, 3-inch and 4-inch single or multi-cell nylon textile innerduct containing 1250lb polyester flat woven pull tape which meets UL2024A for flame propagation and smoke density values for general applications.
- Plenum-Listed Textile Innerduct: Micro (33mm), 2-inch and 3-inch single or multi-cell nylon textile innerduct containing 200lb nylon-resin flat woven pull tape which meets UL2024A for flame propagation and smoke density values for use in air handling spaces.
- Conduit Plugs: Compression-type conduit plugs with locking nuts for sealing and securing one or more textile innerducts within a 4-inch inside diameter conduit, e.g.: 4-inch plug with nine holes for cables in a 3 pack (9-cell) configuration
- Termination Bags: Inflation-type bags for sealing and securing around one or more textile innerducts and cables within 2-inch outside diameter or larger conduit.
- Pull Tape: measuring and pulling tape constructed of synthetic fiber, printed with accurate sequential footage marks. Color-coded.
- Duct Water Seal: products suitable for closing underground and entrance conduit openings where innerduct or cable is installed, to prevent entry of gases, liquids, or rodents into the structure.
- Approved Textile Innerduct #'s  
 MXC4003, MXR4003  
 MXC3456, MXP3456, MXR3456  
 MXC2003, MXP2003, MXR2003  
 MXC2002, MXP2002, MXR2002

D Duct Bank Locating Cable (Detectable Warning Tape)

1 Warning tape

- Warning Tape shall be a minimum of 3" wide, orange in color, 4 mils thick, and shall have an imprint as follows:
  - "Caution Telephone Cable Buried Below" or,
  - "Caution Fiber Optic Cable Buried Below"

E Inter-duct

1 Plenum

- White or orange Kynar PVDF Resin, a fluoropolymer compound.
- Plenum rated flexible optical fiber/communication raceway.
- Provide wire management in a building for fiber optic and data and communications cabling.
- Recognized per NEC Articles, 770 and 800 for Plenum, Riser and General Purpose Raceway for optical fiber, and telecommunications cables.
- UL Listed
- Meets UL 910 standards for Plenum Optical Fiber/Communications raceways.
- Provide all fittings to form a complete integrated raceway system.
- Extrude raceway from precision extruded PVDF resin
- 1"-2" diameter raceway shall have a 1/4" wide 1250 lb. tensile pull tape preinstalled.
- Shall be available in 3/4" through 2" diameters.
- Footage shall be sequentially marked.

- Threaded Aluminum Coupling: Molded Aluminum fitting which connect two pieces of corrugated tubing equipped with threaded ends.
- Quick-Connect Couplings: Molded Part which allows two pieces of 1" diameter corrugated tubing to be quickly snapped together. Available only in 1" diameter.
- Quick-Connect Threaded Male Adapters: Molded fitting which quickly snaps onto a 1" diameter piece of corrugated tubing to produce a threaded end. Available only in 1" diameter.
- Quick-Connect Male Snap-In Adapters: Molded fitting which snaps onto a 1" diameter piece of corrugated tubing to connect to an outlet or switch box. Available only in 1" diameter.
- Metallic Terminal Adapters: Molded metal part which allows a piece of corrugated tubing to connect to metallic conduit and metallic boxes.
- Spool Length: Varies, contractor shall field verify prior to ordering.
- Color: Orange
- Part #: Carlon
  - ¾" CE4X1-1000
  - 1" CF4X1C-1000
  - 1-1/4" CG4X1C-900
  - 1-1/2" CH4X1C-1200
  - 2" CJ4X1C-1400

2 Riser

- Orange polyvinyl chloride (PVC)
- Riser rated Flexible Optical Fiber/Communication Raceway.
- Provides wire management for fiber optic and data and communications cabling in Riser applications and/or General Purpose applications within a building or for direct burial or concrete encasement.
- Recognized per NEC Articles, 770 and 800 for Plenum, Riser and General Purpose applications for optical fiber, and telecommunications cables.
- UL Listed
- Listed under UL 1666 - Standard for Riser Application for Optical Fiber Raceway.
- Provide all fittings to form a complete integrated raceway system.
- Fabricate Raceway from precision extruded PVC resin.
- Kevlar\_ pull tape can be preinstalled in the 1" through 2" diameter.
- The footage shall be sequentially marked.
- Shall be available in ¾" through 2" diameters.
- Threaded Aluminum Coupling: molded Aluminum fitting which connect two pieces of corrugated tubing equipped with threaded ends.
- Quick-Connect Couplings: Molded Part which allows two pieces of corrugated tubing to be quickly snapped together. Available only in ½"-1" diameter.
- Quick-Connect Threaded Male Adapters: Molded fitting which quickly snaps onto a piece of corrugated tubing to produce a threaded end. Available only in ½"-1" diameter.
- Quick-Connect Male Snap-In Adapters: Molded fitting which snaps onto a piece of corrugated tubing to connect to an outlet or switch box. Available only in ½"-1".
- Metallic Terminal Adapters: Molded metal part which allows a piece of corrugated tubing to connect to metallic conduit and metallic boxes.
- Schedule 40 Fittings: Molded fitting that is solvent cemented to the raceways. Schedule 40 fittings are commonly used with PVC Schedule 40 rigid conduit.
- Spool Length: Varies, contractor shall field verify prior to ordering.
- Color: Orange
- Part #: Carlon
  - ¾" DE4X1-1000
  - 1" DF4X1C-1000
  - 1-1/4" DG4X1C-900

1-1/2" DH4X1C-1200  
 2" DJ4X1C-700

- 3 General Purpose for use in Underground Conduit
  - Orange polyvinyl chloride (PVC)
  - General Purpose is nonmetallic flexible raceway for use in General Purpose applications only. It is UL Listed and available with tape pre-installed.
  - General Purpose raceway is listed to UL 2024 in accordance with the National Electrical Code per Articles 725, 770, 800 and 820 for General Purpose and other cabling optical fiber/telecommunication applications.
  - For use in General Purpose areas per Articles 725, 770, 800 and 820 of the NEC.
  - Available in sizes 3/4" through 2"
  - Pull tape can be factory pre-installed in 1" through 2"
  - Outside Diameters meet IPS Dimensions
  - Footage sequentially marked
  - Spool Length: Varies, contractor shall field verify prior to ordering.
  - Color: Orange
  - Part #: Carlon
    - 1" BF4X1B-8000
    - 1-1/4" BG4X1B-5600
    - 1-1/2" BH4X1B-4500
    - 2" BJ4X1B-8000

F Outlet Boxes

- 1 Outlet boxes (voice, data and audio visual)
  - All boxes shall be 5 in. Square x 2.875 in. Deep Metal Box with Cable Management minimum. As required provide 4-11/16" square by 2-1/8" deep.
  - Volume: 64 in<sup>3</sup> (1050 cm<sup>3</sup>)
  - Side Knockouts: (1) 1" & (1) 1-1/4" each side
  - Listing: C ETL US; for use on Class 2 and Class 3 Remote-Control, Signaling and Power-Limited Circuits only.
  - Provide \*\*varied depth\*\* mud ring as required to allow no more than 1/8" gap between wall materials.
  - Approved Outlet box shall be RANDL Inc. T-55 series or Hubbell HBL260/263 Large Capacity Wall Boxes
- 2 Outlet boxes (wall phone, microphone and other devices)
  - All boxes shall be 4-11/16" square by 2-1/8" deep minimum.
  - Provide \*\*varied depth\*\* mud ring as required to allow no more than 1/8" gap between wall materials.
- 3 Junction boxes
  - All boxes shall be 4-11/16" square by 2-1/8" deep minimum.
  - Provide \*\*varied depth\*\* mud ring as required to allow no more than 1/8" gap between wall materials.
- 4 Surface Mount boxes
  - Base has rectangular KO to enable extension from existing single-gang flush wall box and 1/2" and 1" trade size concentric KOs.
  - Accepts NEMA Faceplates
    - One-gang - 4 3/4" H x 3" W x 2 3/4" D equal to Wiremold # 2344
    - Two-gang - 4 3/4" H x 4 7/8" W x 2 3/4" D equal to Wiremold # 2344-2

G Floor Boxes

- 1 Coordinate with Electrical 26 prior to submittal. Contractor shall not order boxes until submittals have been approved.
- 2 Coordinate cable and outlet quantities prior to submittal or ordering of boxes.

- 3 Floor boxes provide the interface between power and communication cabling in an on-grade or above-grade concrete floor where power and communication services are required. Boxes shall provide flush or recessed device outlets that will not obstruct the floor area.
- 4 Provide floor boxes approved for use in concrete floor construction. Boxes shall be approved for above grade (stamped steel) and on grade (cast iron) applications. Floor boxes shall have been examined and tested by Underwriters Laboratories Inc. to meet UL514A and shall bear the appropriate label. Floor boxes shall conform to the standard set in the National Electrical Code. Multi-compartment box shall have been evaluated by UL to meet the applicable U.S. safety standards for scrub water exclusion when used on tile, terrazzo, wood, and carpet covered floors.
- 5 Boxes shall be available in one-, two-, or three-gang configurations or a single unit with four independent wiring compartments and available in stamped steel and cast iron versions. Boxes shall be rectangular in shape and available in deep and shallow versions. Boxes shall provide pre- and post-pour adjustments. Multiple gang boxes shall also provide a removable barrier between the individual compartments for greater capacity when required.
- 6 Multi-Compartment Boxes: Floor boxes shall be manufactured in stamped steel or cast-iron. Box shall be available in shallow version for stamped steel or cast-iron types and deep version for stamped steel type only. Box shall have four independent wiring compartments that allow up to 4 duplex receptacles and/or communications services.
  - Boxes shall permit a tunneling feature that will allow internal wiring to various compartments. The box shall provide various size conduit openings.
  - Boxes shall be fully adjustable, providing a maximum of 1-7/8 inch pre-pour adjustment, and a maximum of 3/4 inch post-pour adjustment.
  - Boxes shall provide a series of device mounting plates that will accept both duplex power devices, as well as plates that will accommodate connectivity outlets and modular inserts. Where indicated, provide connectivity outlets and modular inserts by Wiremold/Ortronics or approved equal.
  - Activation covers shall be die-cast aluminum. Cover finish shall be one of the following, as selected:
    - Textured aluminum finish.
  - Activation covers shall be available in flanged or flangeless versions as selected. Covers shall be available with options for tile or carpet inserts, blank covers, or covers with one or two 1 inch liquid tight openings for furniture feed applications as applicable.
  - Pre-Approved Floor boxes shall be equal to Wiremold RFB-4, RFB6E-OG & RFB-9 series boxes or equal Hubbell System One.
  - Contractor shall provide all required entrance fittings & adapter plates for scope of work depicted.

H Surface mount raceway “SMR”

- 1 Non-metallic raceway is an enclosed pathway used for surface distribution of branch circuit electrical wiring, and cabling for voice, data, multi-media, low voltage, and optical fiber. Raceway is typically installed in existing building structures, or after construction is complete. A complete raceway system includes raceway, covers, mounting hardware, various fittings, and outlet boxes installed at specific locations. Specific codes and standards apply to electrical wires and telecommunications cables that are deployed within non-metallic raceway. Codes that are enforced by the local Authority Having Jurisdiction (AHJ) must be observed during construction.
  - Assembly and disassembly of raceway base, cover, and fittings shall require no special tools.
  - Installed fittings shall be designed to overlap the raceway junction to cover exposed or uneven edges.

- Security caps shall provide enhanced tamper protection by installing over the assembled raceway in desired locations.
- Raceway shall be designed to accept inline device boxes with either horizontal or vertical faceplate orientations.
- Device boxes shall have a removable knockout portion to permit raceway entry and exit. Device boxes shall serve as an extension box by removing a single knockout.
- Device boxes shall be available in standard NEMA single, double, and 3- gang versions. Device box color shall match raceway color.
- Device boxes shall accommodate various faceplates that accept modular connector inserts or bezels for balanced twisted pair, fiber optic, coaxial, multi-media, and other low voltage cabling connectors.
- Faceplates for device boxes shall accommodate pre-printed labels for proper electrical identification, or telecommunications port identification according to ANSI/TIA/EIA-606-A.
- Faceplates shall be available in colors that match the device box and raceway.
- Category rated communications jacks installed in surface box faceplates shall have provisions for snap-in icons for further identification.

2 LD10 series

- LD10 series non-metallic raceway shall be a single channel continuous latching integral one-piece design, supplied with cover closed, with detailed instructions included.
- Raceway shall be available in 6, 8 and 10 ft pre-cut lengths, with or without adhesive backing on the base.
- Raceway shall have markings 1 inch from each end, and every 16 inches to facilitate mounting.
- Raceway base and cover each shall be a rigid non-conductive polymer extrusion, with integral features for latching the cover. Base and cover shall be office white color.
- Raceway material shall be a UV-stabilized polyvinyl chloride (PVC) compound, with UL94-V0 flammability rating.
- Voltage Rating 50V or less
- Wiring capacity information shall be available from the manufacturer for power, telephone wiring, and communications copper or fiber cabling.
- Assembled raceway dimensions shall be 1.51" wide by .94" depth.
- Raceway channel with cover installed shall have an internal cross-sectional area of 1.00 square inches.
- A full range of non-metallic raceway fittings shall be available, including elbows, tees, conduit adapters, splice covers, security caps, and end caps.
- Elbow and tee fittings shall have features to control minimum cable bend radius to 1.00".

3 LD5 series

- LD5 series non-metallic raceway shall be a single channel continuous latching integral one-piece design, supplied with cover closed, with detailed instructions included.
- Raceway shall be available in 6, 8 and 10 ft pre-cut lengths, with or without adhesive backing on the base.
- Raceway shall have markings 1 inch from each end, and every 16 inches to facilitate mounting.
- Raceway base and cover each shall be a rigid non-conductive polymer extrusion, with integral features for latching the cover. Base and cover shall be office white color.
- Raceway material shall be a UV-stabilized polyvinyl chloride (PVC) compound, with UL94-V0 flammability rating.
- Voltage Rating 50V or less

- Wiring capacity information shall be available from the manufacturer for power, telephone wiring, and communications copper or fiber cabling.
- Assembled raceway dimensions shall be 1.01" wide by .58" depth.
- Raceway channel with cover installed shall have an internal cross-sectional area of .38 square inches.
- A full range of non-metallic raceway fittings shall be available, including elbows, tees, conduit adapters, splice covers, security caps, and end caps.
- Elbow and tee fittings shall have features to control minimum cable bend radius to 1.00".

4 LD3 series

- LD3 series non-metallic raceway shall be a single channel continuous latching integral one-piece design, supplied with cover closed, with detailed instructions included.
- Raceway shall be available in 6, 8 and 10 ft pre-cut lengths, with or without adhesive backing on the base.
- Raceway shall have markings 1 inch from each end, and every 16 inches to facilitate mounting.
- Raceway base and cover each shall be a rigid non-conductive polymer extrusion, with integral features for latching the cover. Base and cover shall be office white color.
- Raceway material shall be a UV-stabilized polyvinyl chloride (PVC) compound, with UL94-V0 flammability rating.
- Voltage Rating 50V or less
- Wiring capacity information shall be available from the manufacturer for power, telephone wiring, and communications copper or fiber cabling.
- Assembled raceway dimensions shall be .77" wide by .46" depth.
- Raceway channel with cover installed shall have an internal cross-sectional area of .21 square inches.
- A full range of non-metallic raceway fittings shall be available, including elbows, tees, conduit adapters, splice covers, security caps, and end caps.
- Elbow and tee fittings shall have features to control minimum cable bend radius to 1.00".

5 Overfloor Raceway (OFR) – Legrand

- OFR series metallic raceway shall be a low profile multi-channel two-piece design, supplied with cover closed, with detailed instructions included.
- Raceway shall be available in 8 ft pre-cut lengths.
- Raceway base and cover each shall be a multi-channel aluminum. Base and cover shall be powder coated black.
- Raceway shall meet UL requirements for crush resistance to 300 Lb distributed load.
- Raceway shall have a UL/CSA rating of 600 volts safe operating range.
- Wiring capacity information shall be available from the manufacturer for power, telephone wiring, and communications copper or fiber cabling.
- Assembled raceway dimensions shall be 6 7/8" wide by .5" depth.
- A full range of non-metallic raceway fittings shall be available, including elbows, tees, conduit adapters, splice covers, security caps, and end caps.
- Elbow and tee fittings shall have features to control minimum cable bend radius to 1.25" according to ANSI/TIA/EIA-568-B standards for communications copper and optical fiber cabling.

I Poke Thru Floor device

- 1 Coordinate with Electrical 26 prior to submittal or ordering of boxes.
- 2 Coordinate cable and outlet quantities prior to submittal or ordering of boxes.

- 3 Poke Thru boxes provide the interface between power and communication cabling in an above-grade concrete floor where power and communication services are required. Boxes shall provide flush or recessed device outlets that will not obstruct the floor area.
- 4 Pre-Approved Poke Thru boxes shall be equal to Wiremold 6ATCFFNK

## 5.2 Cable Support Systems

### A General

- 1 The contractor shall provide a complete cable support system as shown on the project drawings.
- 2 The cable support system shall be used to distribute communications cable for utility needs.
- 3 The support system shall consist of Wire Basket Tray, Ladder rack, and j-hook pathways, and appropriated fittings and accessories for a complete installation.

### B Wire Basket Tray

- 1 Wire Basket Tray is to be utilized in locations only as covered in Article 392 of the National Electric Code, as adopted by the National Fire Protection Association and as approved by the American National Standards Institute.
- 2 Trays shall be constructed of 6063 T6 and T5 aluminum alloys and shall utilize center lines to indicate all areas where after field cutting of tray, new holes need to be drilled or screws inserted (Center Spine, Twin Spine, Ladder Style and Wall Mounted Trays).
- 3 Cable tray shall be constructed to form an open and accessible compartment to hold the necessary cables. The tray shall be constructed of two components, (1) two longitudinal support rails (side rails) and (2) the rungs. The rail shall be a single aluminum extrusion with extending flanges that provide rung support. The rungs shall have 7/8-inch cable laying surface and be attached with sheet metal screws to the two side rails on 6 inch, 9 inch or 12 inch centers, creating a cable laying area between the rails.
- 4 Wall Mounted Cable Tray: Cable tray shall be constructed to form an open and accessible compartment to hold the necessary cables which also enables full viewing of the compartment. The tray shall be wall mounted allowing cable lay-in where applicable.
- 5 A full complement of fittings for the wire basket tray shall be available including, but not limited to, 45 and 90-degree flat, vertical inside and outside elbows, tee and cross fittings, couplings for joining sections of the tray, hangers, end blanks, field-installed dividers and all other components necessary to make the system perform as intended. The fittings and accessories shall be of a compatible material.
- 6 Wire Basket Tray
  - Wire mesh cable tray shall be manufactured from round carbon steel wires that are 5 mm and 6 mm in diameter. Wires shall be welded at intersections to form a 2" x 4" grid pattern. The tray shall be U-shaped with equal height sidewalls.
  - Individual tray sections shall be 10' long and 4", 6", 8", 12", 16", 18", 20", or 24" wide. Sidewalls shall be 4" high, as specified below.
  - Wire mesh cable tray shall be black with powder coat paint.
  - Wire mesh cable tray that is 6" wide or wider shall be UL Classified for suitability as an equipment grounding conductor only. Pre-galvanized trays shall be UL Classified in the United States. Painted tray shall be UL Classified in the United States.
  - Ladder Rack shall be grounding per the ANSI/TIA 607-A.
  - Color: Black
  - Quantity: See Drawing for quantity and installation details.
  - Part # shall be Wire Basket Tray, or other pre-approved equal:
    - 4" High x 4" Wide **WBT4x4 S**
    - 4" High x 6" Wide **WBT4x6 S**
    - 4" High x 8" Wide **WBT4x8 S**
    - 4" High x 12" Wide **WBT4x12 S**
    - 4" High x 16" Wide **WBT4x16 S**



- 4" High x 18" Wide **WBT4X18 S**
- 4" High x 20" Wide **WBT4X20 S**
- 4" High x 24" Wide **WBT4X24 S**
- Provide all installation hardware required for installation whether shown on the plans or not. Some of the supports may require design build application and shall be included by the contractor without notice.
  - Standard Splice Kit
  - Splice Bar
  - Splice Washer & Bolt Kit
  - Spring Splice Kit
  - Clamp Washer
  - Carriage Bolt Hardware Kit
  - 90° Splice Bar Kit
  - Rack-Mount Hook
  - Pedestal Clamp Bracket
  - Split Bolt Grounding Clamp
  - Cable Tray Divider
  - Cover
  - Cable Tray Bottom Insert
  - Cable Tray Liner
  - Tool-Less Radius Drop
  - Large Radius Drop
  - Vertical Radius Bracket
  - Electrical Box Bracket
  - Conduit Bracket
  - Auxiliary Side Bracket
  - Section Support Bracket
  - Label Holder
  - Cable Tray Cutting Tool
  - Threaded Rod, 3/8-16
  - Threaded Rod Coupling Kit, 3/8-16
  - Threaded Rod I-Beam Clamp, 3/8-16
  - Hex Nut, 3/8-16
  - Split Lock Washer, 3/8"
  - Washer, 3/8"
  - Hex Lag Screw, 3/8-7 x 2" Long
  - Hex Lag Screw, 1/4-10 x 2" Long
  - Split Lock Washer, 1/4"
- Provide all support systems required for installation whether shown on the plans or not. Some of the supports may require design build application and shall be included by the contractor without notice.
  - Wire Mesh Cable Tray System Supports
  - Ceiling Center Support Bracket
  - Ceiling Edge Hanger
  - Ceiling Trapeze Support Bracket
  - Wall/Ceiling C-Support Bracket
  - Wall L-Support Bracket
  - Wall Triangle Support Bracket
  - Wall-Mount Angle

- Under Floor Support
- Under Floor C-Bracket
- Pedestal Clamp Bracket Kit

C Ladder Rack Cable Runway

- Stringers shall be fabricated from ASTM A513 Steel tubing.
- Rungs shall be fabricated from 3/8"x1 1/2" steel channel welded
- Rungs shall be spaced at 12.0" center to center
- Ladder Rack shall have a powder coat finished.
- Ladder Rack shall be individually boxed
- Ladder rack shall be a part of a total system that includes: manufacture bends, wall supports, joining hardware, etc.
- Ladder Rack shall be grounding per the ANSI/TIA 607-A.
- Ladder Rack shall be UL listed- File number E60548
- Color: Ladder Rack will be BLACK
- Quantity: See Drawing for quantity and installation details.
- Part # shall be Chatsworth Unless Otherwise Noted:
  - 12" Wide **10250-712**

D Cabling Support System

- 1 Telco Backboards
  - Backboards shall be 4' x 8' x .75" void free plywood (ACX Plywood with the "A" side turned out).
  - The plywood shall be painted with two coats of white fire retardant paint.
  - Cut full size sheet to required size for application type, minimum 6" larger than equipment installed.
- 2 J-Hooks
  - Cable supports shall provide a bearing surface of sufficient width to comply with required bend radii of high-performance cables; cULus Listed.
  - Cable supports shall have flared edges to prevent damage while installing cables.
  - Cable support system shall provide fasteners that allow them to be mounted to wall, concrete, joist, tee-bar wire, treaded rod, beams and raised floor supports.
  - Fasteners shall have the ability to either be factory or jobsite assembled; rated for indoor use in non-corrosive environments; cULus Listed.
  - Fastener to with one non-continuous cable support, factory or jobsite assembled.
  - Color: NA
  - Quantity: Contractor will provide quantities of j-hooks and hanger accessories in the amount necessary to support all horizontal cabling every 4-5 feet.
  - Part#: ERICO CAT425, Cooper B-Line BCH12, BCH21, BCH32, BCH64 and accessories.

E Pull Rope

- 1 Pulling Ropes (Mule tape)
  - Pull ropes shall be 1/2" flat tape with a minimum tensile strength of 1200 lbs.
  - Ropes shall be pre-lubricated, woven polyester or aramid fiber tape made from low friction, high abrasion resistant yarns providing a low coefficient of friction. Tape shall be printed with sequential footage markings for accurate measurements.
- 2 Empty Conduits
  - Pull rope shall be new 1/4" polypropylene over polyester rope with a minimum 1200 lb. tensile strength.
  - Every empty conduit shall be equipped with a pull rope secured to the duct plug at each end.
- 3 Installed with Cables:

- Pull rope shall be new 1/8" polypropylene string with a minimum 750 lb. tensile strength.
- Contractor will be required to install a pull string into every conduit that they pull cabling.

### 5.3 Fire-Stop Systems

#### A General

- 1 Contractor will use this specification as a guide, refer to architectural firestop specifications for all product related part numbers.
- 2 Sleeves shall be 2", 3" or 4" EMT or smaller. All cables penetrating walls must be sleeved.
- 3 Sleeves shall maintain a 40% conduit fill ratio.
- 4 Sleeves must be supported or attached at walls by apparatuses meant to do so. All sleeves shall be rigidly and properly supported.
- 5 Sleeves must extend past inaccessible areas.
- 6 Sleeves must be protected by a U.L. rated system at all firewalls designated on the construction drawings.
- 7 Fire stopping shall be a material, or combination of materials, to retain the integrity of time-rated construction by maintaining an effective barrier against the spread of flame, smoke, and gases. It shall be used in specific locations as follows:
  - Duct, cables, conduit, piping, and cable tray penetrations through floor slab and through time-rated partitions or fire walls.
  - Openings between floor slab and curtain walls, including inside hollow curtain walls at the floor slab.
  - Penetrations of vertical service shafts.
  - Openings and penetrations in time-rated partitions of fire walls containing fire doors.
  - Locations where specifically shown on the drawings or where specified in other sections of the Standards.
- 8 Fire stopping materials shall be asbestos free and capable of maintaining an effective barrier against flame, smoke, and gasses in compliance with requirements of ASTM E 814, and UL 1479. Only listed fire stopping material acceptable to State, County, and City codes shall be used.
- 9 The rating of the fire stops shall in no case be less than the rating of the time rated floor or wall assembly.
- 10 All Fire stopping Locations (FSL) shall be labeled within 12" of the fire stopping material on each side of the penetrated fire barrier. The format for the Fire stopping Location identifier shall display the Telecom Room floor number, the Fire stopping Location number, and the hour rating of the fire rating system (e.g. 1-FLS001 (2) ). Each fire stopping location shall be identified with a fire stopping warning label. The label shall include the manufacturer of the product, the installer and company name, the UL number for the product, the rating of the material, the installation date, and the number and type of cables passing through the opening. The fire stopping warning label can include the fire stopping location identifier, eliminating the need for a separate label. Penetration modifications requiring the repair/re-installation of the fire stopping material require the addition of a new fire stopping warning label. No previous fire stopping warning labels shall be removed or obscured by new labels. In the event the penetration is completely cleaned of existing fire stopping material, and new material is installed, the previous label shall be removed or obscured completely.
- 11 Manufacturers; Specified Technologies Inc., 3M & Hilti
  - SSS - intumescent sealant
  - SSP - putty and putty pads
  - SSAMW - mineral wool
  - IC 15WB+ - intumescent sealant
  - CP 25WB+ - intumescent sealant
  - Fire Barrier Moldable Putty+ - putty and putty pads

- FS-ONE - intumescent sealant
- CP 618 - putty and putty pads.

**B Re-Enterable Smoke/Acoustic Stop System**

- 1 EZ -Path Smoke & Acoustical Pathway is a pathway device designed to allow cables to penetrate nonrated walls and floors without the need for smoke sealing. This device features a built-in smoke sealing system that automatically adjusts to the amount of cables installed. Once installed in a barrier, cables can be easily added or removed at any time without the need to remove or reinstall caulking materials.
- 2 Its profile allows a maximum number of cables to be installed in a relatively small area. The pathway measures approximately 4.5" (114 mm) x 4.5" (114 mm) and is adjustable to accommodate wall and floor thicknesses between 4" (102 mm) and 8" (203 mm).
- 3 EZ-Path Smoke & Acoustical Pathways have been tested to measure air leakage. Leakage ratings per device are <1 CFM empty and <2.5 CFM at maximum 100% visual fill, attesting to the ability of the device to provide necessary sealing function in various applications. Acoustical testing confirmed that the product can restore the STC (Sound Transmission Classification) Ratings to walls that have been penetrated with a maximum STC of 61.
- 4 No additional fire stopping material shall be required to obtain proper Smoke/Acoustic stopping.
- 5 The system shall be self-contained, and shall automatically adjust to differing cable loads.
- 6 The system shall allow add, moves, and changes without additional materials.
- 7 All penetrations through unrated building structures (walls and floors) shall be sealed with an appropriate re-enterable Smoke/Acoustic stop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow unrated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper fire stop equipment.
- 8 Smoke/Acoustic stop systems shall be UL Classified to Plenum UL2043.
- 9 The system shall be gang-able using wall plates for additional capacity.
- 10 Quantity: See Drawing for quantity and installation details.
- 11 Part #: Equal to STI
  - PN# NEZ33
  - PN# NEZDP233
  - PN# NEZDP433

**C Single Entry System**

- 1 The fire stop system is comprised of the item or items penetrating the fire rated structure, the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure.
- 2 Fire stop systems comprise an effective block for fire, smoke, heat, vapor and pressurized water stream.
- 3 All penetrations through fire-rated building structures (walls and floors) shall be sealed with an appropriate fire stop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper fire stop equipment.
- 4 Fire stop systems shall be UL Classified to ASTM E814 (UL 1479).
- 5 Quantity: See Drawing for quantity and installation details.
- 6 Part#: Equal to STI, PN# SSS100

**D Re-Enterable Fire Stop System**

- 1 The re-enterable fire stop system is comprised of the item or items penetrating the fire rated structure, the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure.
- 2 No additional fire stopping material shall be required to obtain proper fire stopping.

- 3 The system shall offer full fire resistance whether it is empty or 100% visually filled.
- 4 The system shall be self-contained, and shall automatically adjust to differing cable loads.
- 5 The system shall allow add, moves, and changes without additional materials.
- 6 All penetrations through fire-rated building structures (walls and floors) shall be sealed with an appropriate re-enterable fire stop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper fire stop equipment.
- 7 Fire stop systems shall be UL Classified to ASTM E814 (UL 1479).
- 8 The system shall be gang-able using wall plates for additional capacity.
- 9 Quantity: See Drawing for quantity and installation details.
- 10 Part #: Equal to STI
  - STI PN# EZDP33FWS
  - STI PN# EZDP33WR

## 5.4 Grounding/Bonding Systems

### A Grounding and Bonding Equipment

- 1 Telecommunications Main Grounding Busbar (TMGB)
  - Telecommunications Main Grounding Busbar (TMGB) shall be constructed of .25" (6.4 mm) thick solid copper bar.
  - The buss bar shall be 4" (100 mm) high and 12" (300 mm) long and shall have 18 attachment points (two rows of 9 each) for two-hole grounding lugs.
  - The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 15 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4 mm) hole centers.
  - The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall.
  - The busbar shall be UL Listed as grounding and bonding equipment.
  - Design Make shall be:
  - Chatsworth Products, Inc. (CPI),
  - Telecommunications Main Grounding Busbar: Part Number 40153-012, 12" x 4" (300 mm x 100 mm) Telecommunications Main Grounding Busbar, UL Listed.
- 2 Telecommunications Grounding Busbar (TGB)
  - Telecommunications Grounding Busbar (TGB) shall be constructed of .25" (6.4 mm) thick solid copper bar.
  - The busbar shall be 2" (50 mm) high and 10" (250 mm) long and shall have 7 attachment points (one row) for two-hole grounding lugs.
  - The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 4 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4 mm) hole centers.
  - The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall.
  - The busbar shall be UL Listed as grounding and bonding equipment.
  - Design Make shall be:
  - Chatsworth Products, Inc. (CPI),
  - Telecommunications Grounding Busbar:
  - Part Number 13622-010, 10" x 2" (250 mm x 50 mm) Telecommunications Grounding Busbar, UL Listed.
- 3 Horizontal Rack Busbar
  - Horizontal rack-mount busbar shall be constructed of 3/16" (4.7 mm) thick by 3/4" (19.1 mm) high hard-drawn electrolytic tough pitch 110 alloy copper bar.
  - Bar shall be 19" EIA or 23" rack mounting width (as specified below) for mounting on relay racks or in cabinets.

- Bar shall have eight 6-32 tapped ground mounting holes on 1" (25.4 mm) intervals and four 0.281" (7.1 mm) holes for the attachment of two-hole grounding lugs.
  - Each bar shall include a copper splice bar of the same material (to transition between adjoining racks) and two each 12-24 x 3/4" copper-plated steel screws and flat washers for attachment to the rack or cabinet.
  - Bar shall be UL Listed as grounding and bonding equipment.
  - Design Make shall be:
    - Chatsworth Products, Inc. (CPI),
    - Horizontal Rack Busbar: Part Number 10610-019, Ground Bar for 19" Rack.
- 4 Two Mounting Hole Ground Terminal Block
- Ground terminal block shall be made of electroplated tin aluminum extrusion.
  - Ground terminal block shall accept conductors ranging from #14 AWG through 2/0.
  - The conductors shall be held in place by two stainless steel set screws.
  - Ground terminal block shall have two 1/4" (6.4 mm) holes spaced on 5/8" (15.8 mm) centers to allow secure two-bolt attachment to the rack or cabinet.
  - Ground terminal block shall be UL Listed as a wire connector.
  - Design Make shall be:
    - Chatsworth Products, Inc. (CPI),
    - Two Mounting Hole Ground Terminal Block:
      - Part Number 40167-001, Two Mounting Hole Ground Terminal Block, 1 each
  - Compression Lugs
    - Compression lugs shall be manufactured from electroplated tinned copper.
    - Compression lugs shall have two holes spaced on 5/8" (15.8 mm) or 1" (25.4 mm) centers, as stated below, to allow secure two bolt connections to busbars.
    - Compression lugs shall be sized to fit a specific size conductor, sizes #6 to 4/0, as stated below.
    - Compression lugs shall be UL Listed as wire connectors.
  - Design Make shall be:
    - Chatsworth Products, Inc. (CPI),
    - Compression Lugs:
      - Part Number 40162-901, Compression Lug, #6 Awg, 5/8" (15.8 mm) hole spacing, 1 each.
      - Part Number 40162-903, Compression Lug, #6 Awg, 1" (25.4 mm) hole spacing, 1 each.
      - Part Number 40162-904, Compression Lug, #2 Awg, 5/8" (15.8 mm) hole spacing, 1 each.
      - Part Number 40162-907, Compression Lug, #2 Awg, 1" (25.4 mm) hole spacing, 1 each.
      - Part Number 40162-909, Compression Lug, 2/0 Awg, 1" (25.4 mm) hole spacing, 1 each.
      - Part Number 40162-911, Compression Lug, 4/0 Awg, 1" (25.4 mm) hole spacing, 1 each.
- 5 Antioxidant Joint Compound
- Oxide inhibiting joint compound for copper-to-copper, aluminum-to-aluminum or aluminum-to-copper connections.
  - Design Make shall be:
    - Chatsworth Products, Inc. (CPI),
    - Antioxidant Joint Compound:
      - Part Number 40168-101, Antioxidant Joint Compound, Copper-to-Copper Connections, .5 oz, 1 each.
      - Part Number 40168-801, Antioxidant Joint Compound, Copper-to-Copper Connections, 8 oz, 1 each.
      - Part Number 40166-101, Antioxidant Joint Compound, Aluminum-to-Aluminum or Aluminum-to-Copper Connections, .5 oz, 1 each.

- Part Number 40166-801, Antioxidant Joint Compound, Aluminum-to-Aluminum or Aluminum-to-Copper Connections, 8 oz, 1 each.
  - Part Number 40168-150, Antioxidant Joint Compound, Copper-to-Copper Connections, .5 oz, 50 each.
  - Part Number 40168-812, Antioxidant Joint Compound, Copper-to-Copper Connections, 8 oz, 12 each.
  - Part Number 40166-150, Antioxidant Joint Compound, Aluminum-to-Aluminum or Aluminum-to-Copper Connections, .5 oz, 50 each.
  - Part Number 40166-812, Antioxidant Joint Compound, Aluminum-to-Aluminum or Aluminum-to-Copper Connections, 8 oz, 12 each.
- 6 C-Type, Compression Taps
- Compression taps shall be manufactured from copper alloy.
  - Compression taps shall be C-shaped connectors that wrap around two conductors forming an irreversible splice around the conductors; installation requires a hydraulic crimping tool
  - Compression taps shall be sized to fit specific size conductors, sizes #2 AWG to 4/0, as stated below.
  - Compression taps shall be UL Listed.
  - Design Make shall be:
  - Chatsworth Products, Inc. (CPI),
  - Compression Taps:
  - Part Number 40163-001, Compression Tap, #6 AWG Solid Run to #6 AWG Solid Tap, 1 each.
  - Part Number 40163-007, Compression Tap, 2/0 Stranded Run to 2/0 Stranded Tap, 1 each.
- 7 Pipe Clamp With Grounding Connector
- Pipe clamp shall be made from electroplated tinned bronze. Installation hardware will be stainless steel.
  - Pipe clamp shall be sized to fit up to two conductors ranging in size from #6 to 250 MCM; conductors must be the same size.
  - Pipe clamp installation hardware shall be sized to attach to pipes, sizes 1" to 6" (.75" to 6.63" in diameter), as stated below.
  - Pipe clamp shall be UL Listed as grounding and bonding equipment.
  - Design Make shall be:
  - Chatsworth Products, Inc. (CPI),
  - Pipe Clamps:
  - Part Number 40170-002, Pipe Clamp, for 1" to 1-1/4" pipe, 1 each.
  - Part Number 40170-003, Pipe Clamp, for 1-1/2" to 2" pipe, 1 each.
  - Part Number 40170-004, Pipe Clamp, for 2-1/2" to 3" pipe, 1 each.
  - Part Number 40170-005, Pipe Clamp, for 3-1/2" to 4" pipe, 1 each.
  - Part Number 40170-006, Pipe Clamp, for 5" to 6" pipe, 1 each.
- 8 Equipment Ground Jumper Kit
- Kit includes one 24"L insulated ground jumper with a straight two hole compression lug on one end and an L-shaped two hole compression lug on the other end, two plated installation screws, an abrasive pad and a .5 ounce tube of antioxidant joint compound.
  - Ground conductor is an insulated green/yellow stripe #6 AWG wire
  - Lugs are made from electroplated tinned copper and have two mounting holes spaces .5" to .625" apart that accept 1/4" screws.
  - Jumper will be made with UL Listed components
  - Design Make shall be:
  - Chatsworth Products, Inc. (CPI),
  - Equipment Ground Jumper Kit:
  - Part Number 40159-010, Equipment Ground Jumper Kit, 1 each.

- B Communications raceways, backboards and rack systems
  - 1 The conduit system must be permanently and effectively grounded, in accordance with Title 24 of the California Code of Regulations, California Electric Code #250, and National Electric Code or as required by local AHJ. If in confusion or conflict the most stringent specification shall apply.
  - 2 Provide as a minimum a #1/0awg THHN conductor in conduit from the main building grounding point to a 1/4" x 4" x 5.25" telecommunications grounding bus bar(TGB) at every backboard.
  - 3 Provide as a minimum #6awg green THHN conductor from each equipment rack, cable tray or wall mounted equipment to a TGB.

**5.5 Concrete for Telecom System**

- A All Concrete
  - 1 Refer to Concrete specification; all concrete shall be governed by this specification.
  - 2 Proportion the cement, water and aggregate to obtain concrete with good workability.
  - 3 Use Type I Portland Cement for slurry mix and Type II for riprap grout. according to ASTM C 150.
- B Concrete Slurry
  - 1 Fine aggregate for concrete slurry shall completely pass the 3/8" sieve with no more than 5% passing the No. 100 sieve. The fine aggregate shall contain no silt, loam, clay or organic particles.
- C Concrete RipRap Grout
  - 1 Fine aggregate for riprap grout shall completely pass the No. 4 sieve with no more than 5% passing the No. 100 sieve.
- D General Concrete Notes
  - 1 Ensure that the concrete slurry develops a 12-hour compressive strength of 500 psi and a slump of 7 inches, +/- 1 inch for concrete slurry; the riprap grout requires a 28-day minimum strength of 3000 psi and a slump of 4 inches +/- 1 inch. Furnish concrete for specimens.
  - 2 Concrete shall be placed as nearly as practical to its final position to avoid flow causing segregation of the aggregate. Concrete should not be dropped more than 5 feet vertically without the use of a tremie or similar device. Do not place concrete in a manner that will cause the pipe to float. Vibrate or rod the concrete as necessary to remove voids.

**Part 3 Execution**

**5.6 General**

- A Permits and Licensing
  - 1 Contractor is responsible to procure all necessary permits before the commencement of their work to the city or state agencies as required. It is the contractor's responsibility to provide all documentation to the AHJ.
  - 2 Contractor to procure all encroachment permits as it pertains to the work described in these documents.
  - 3 No person may access or enter in any way, an underground vault or confined space without the training, staff, and safety equipment defined on the confined space permit. Accessing these spaces without a valid permit or without the required support services will be cause for an order to stop work until all violations are resolved and may result in a fine or suspension of the workers involved.



**B Safety**

- 1 All federal (OSHA), state, and local safety rules, will be enforced at all times during the duration of the project. It is the responsibility of the Contractor to conduct frequent inspections of the job site to ensure compliance.

**5.7 Installation**

**C Intra-Building Pathways**

**1 Communications Vaults**

- Site Access
  - The general contractor shall be responsible for providing adequate access to the site to facilitate hauling, storage and proper handling of the precast concrete units.
- Installation
  - Precast concrete units shall be installed to the lines and grades shown in the contract documents or otherwise specified.
  - Precast concrete units shall be lifted by suitable lifting devices at points provided by the precast concrete producer.
  - Precast concrete units shall be installed in accordance with applicable industry standards. Upon request, the precast concrete producer shall provide installation instructions.
  - Field modifications to the product shall relieve the precast producer of liability regardless if such modifications result in the failure of the precast concrete unit.
- Water Tightness
  - Where water tightness is a necessary performance characteristic of the precast concrete unit’s end use, watertight joints, pipe-entry connectors and inserts should be used to ensure the integrity of the entire system.

**2 Conduit**

- All conduit shall be routed parallel or perpendicular to walls.
- All conduit shall be installed in accordance with NEMA “Standard of Installation” and shall meet applicable local and national building and electrical codes or regulations.
- Conduit runs shall not exceed 100 feet or contain more than two 90-degree bends without utilizing appropriately sized pull boxes. No conduits may enter a pull box at a 90-degree angle. They are not to be installed into the side of a pull box. All conduits must enter the ends of the pull box.
- All conduits entering a building from outside shall be plugged with reusable stoppers to eliminate the entrance of water or gases into the entrance room. Building entrance conduits shall slope downward away from the building to reduce the potential of water entering the building. All building penetrations are to be sealed from wall to wall and on the outside and inside of the penetrations.
- All conduits penetrating a fire or smoke barrier shall be fully sealed between the conduit and the actual penetration following manufacturer’s recommendations. Contractor shall label each fire stop location with the manufacturer’s identification number of the product used and shall provide the inspector copies of each products system configuration.
- No communications outlet boxes shall be “daisy-chained.” Each communications outlet shall be served by a separate 1-inch (minimum) conduit.
- In rooms with a drop or false ceiling, communications outlets shall be served by a 1-inch conduit stubbed six inches above the false ceiling, angled toward the cable tray or open access area, and be equipped with a compression fitting and plastic bushing. All stubs shall be marked “Comm”.

- All conduit shall be equipped with an approved water or barrier seal in building access points.
  - No communications conduit shall contain more than 180 degrees of bend without the use of a pull box. Pull boxes must be approved by Consultant of Record to ensure proper sizing and conduit entry placement.
  - In areas where hard lid ceilings are in place, all conduits are to run to accessible location or to cable tray.
  - Provide labels at both ends of conduits to identify location of far end.
- 3 Station Cable Support System
- All station cable support systems shall be braced for zone four seismic activity.
  - In suspended ceiling and raised floor areas where duct, cable trays, or conduit are not available, station cables shall be bundled with Velcro straps at appropriate distances.
  - Velcro straps shall not be over tightened to the point of deforming or crimping the cable sheath.
  - Velcro straps shall be UL listed, rated for low smoke, and certified for use in a plenum environment.
  - The station cable support system components shall be firmly attached to the existing building structure and installed not more than five feet apart.
  - The station cable support system components shall be installed to provide at least three (3) inches of clear vertical space between the cables/optics and the ceiling tiles.
  - The station cable support system components shall be spaced to prevent the cables/optics from sagging or buckling.
  - No more than eighteen (18) Category 6 cables shall be supported by a J - hook.
  - No more than thirty (30) Category 6 cables shall be supported by triangular galvanized metal bracket.
  - The station cable support system shall be clearly and neatly labeled per ANSI/TIA 606-A, Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.
- 4 Raceways
- All dual channel raceway shall be installed with a complete end-to-end channel for future power service installation.
  - The raceway shall be stubbed above the false ceiling space and capped so that each section of raceway can be connected to a power service in the future without a requirement to add raceway to visible portions of the system. If no false ceiling space is available, the power channel is to be stubbed up and capped next to the point at which the communication services enter the room.
- 5 Cable Tray
- The Contractor will be responsible for placement of the cable tray in concert with other trades, allowing sufficient room for the cable installers to gain access to all portions of the tray system. Cable tray location shall be coordinated with open ceiling areas, access panel locations, and feeder conduit positions to provide an accessible cable pathway throughout the facility.
  - All metallic trays must be grounded and may be used as a ground conductor. Provide #2 AWG bare copper equipment grounding conductor through entire length of tray; bond to each component. Trays used as an equipment grounding conductor must be clearly marked.
  - Trays shall be bonded end-to-end.
  - Trays shall enter distribution rooms a minimum of six inches into the room, then utilize a drop out to protect station cables from potential damage from the end of the tray.
  - Cable trays shall be placed a minimum of six (6) inches from any overhead light fixture and twelve (12) inches from any electrical ballast. A minimum of eight (8) inches of clearance above the tray shall be maintained at all times. All bends and T-joints in the tray shall be fully accessible from above (within 1 foot). Trays shall be

mounted no higher than twelve (12) feet above the finished floor and shall not extend more than eight (8) feet over a fixed ceiling area.

- A separate conduit sleeve (minimum of four inches) must be provided as a pathway through any wall or over any obstruction (such as a rated hallway) from the cable tray into any room having a communications outlet.
- The Contractor shall fire stop around the tray and, after installation of the cables, within the tray using removable pillow-style products following manufacturers' guidelines. Sound deadening material shall be provided and installed after installation of cable.
- In rooms without a drop ceiling (open to the structure), the cable shall be mounted as high as possible to provide the greatest clearance above the finished floor, but within the limits in (e) above.

#### 6 Wire Mesh Cable Tray

- Provide all components of the tray system (tray, supports, splices, fasteners, and accessories) from a single manufacturer.
- Wire mesh cable tray shall be secured to the structural ceiling, building truss system, wall or floor using manufacturer's recommended supports and appropriate hardware as defined by local code or the authority having jurisdiction (AHJ).
- When the pathway is overhead, wire mesh cable tray shall be installed with a minimum clearance of 12" (300 mm) above the tray. Leave 12" (300 mm) in between the tray and ceiling/building truss structure. Multiple tiers of wire mesh cable tray shall be installed with a minimum clearance of 12" (300 mm) in between the trays. When located above an acoustical drop ceiling, wire mesh cable tray shall be installed a minimum of 3" (75 mm) above the drop ceiling tiles.
- When installed under a raised floor, wire mesh cable tray shall be installed with a minimum 3/4" (19 mm) clearance between the top of the tray and the bottom of the floor tiles or floor system stringers, whichever are lower in elevation. Maintain a 3" (75 mm) clearance between trays wherever trays cross over.
- Wire mesh cable tray shall be supported every 6' (1.8 m) of span or less. Support wire mesh cable tray within 2' (0.6 m) of every splice and intersection. Support intersections on all sides. Support wire mesh cable tray on both sides of every change in elevation/direction. The weight of the load on the cable tray must not exceed the stated limits per span in the manufacturer's published load table. Use additional supports where needed.
- Secure wire mesh cable tray to each support with a minimum of one fastener. Follow the manufacturers' recommended assembly, splice and intersection-forming practices.
- Use installation tools and practices recommended by the manufacturer to field fabricate wire mesh cable tray intersections and changes in elevation. Use side-action bolt cutters with an offset head to cut wire mesh cable tray.
- Wire mesh cable tray shall be bonded to the Telecommunications Grounding Busbar (TGB) using an approved ground lug on the wire basket tray and a minimum #6 grounding wire or as recommended by the AHJ. Follow UL Classified splicing methods recommended by the manufacturer, ground the tray per NEC requirements and verify bonds at splices and intersections between individual cable tray sections. Cable pathway should be electrically continuous through bonding and attached to the TGB.
- The quantity of cables within the tray will not exceed a whole number value equal to 50% of the interior area of the tray divided by the cross-sectional area of the cable. Cable fill will not exceed the depth of the cable tray's side rail [2" (50 mm), 4" (100 mm) or 6" (150 mm)].
- The combined weight of cables within the tray will not exceed stated load capacity in manufacturer's specifications.
- Separate different media type within the tray. Treat each type of media separately when determining cable fill limits.

- When pathways for other utilities or building services are within 2' (0.6 m) of the wire mesh cable tray, cover the tray after cables are installed.

7 Pull Boxes

- Pull boxes shall be installed in easily accessible locations.
- Pull boxes installed as part of a horizontal cabling pathway shall be installed immediately above suspended ceilings, where possible.
- Pull boxes shall not be used for splicing cable.
- Pull boxes shall be placed in conduit runs that exceed 100 feet or which require more than two 90 degree bends. The pull boxes shall be located in straight sections of conduit and must not be used for a right angle bend. Installation shall allow cable to pass through from one conduit to another in a direct line.
- Pull boxes must have a length at least 12 times the diameter of the largest conduit.

D Grounding and Bonding Systems

1 General

- Installation: The Contractor shall provide grounding and bonding in accordance with the requirements of NFPA 70, IEEE 142, ANSI/TIA 568, ANSI/TIA 607, state and local codes, the campus standards and to requirements specified herein. Codes shall be complied with as a minimum requirement, with these specifications prevailing when they are more stringent.
- Bonding
  - Metallic conduits, wireways, metal enclosures of busways, cable boxes, equipment housings, cable racks and all non-current carrying metallic parts of the installed telecommunications services shall be grounded with #6 AWG copper wire. The metallic conduit system shall be used for equipment and enclosure grounding but not as a system ground conductor.
  - All metallic conduit stub-ups shall be grounded, and where multiple stub-ups are made within an equipment enclosure, they shall be equipped with grounding bushings and bonded together and to the enclosure and the enclosure ground bus.
  - Each metallic raceway, pipe, duct and other metal object entering the buildings shall be bonded together. The Contractor shall use #6 AWG bare copper conductors.
  - The Contractor shall bond telecommunications equipment and busbars separately.

2 Signal Reference Grounding and Bonding

- Each identified telecommunications space within a building shall have a common signal reference ground. The signal reference ground shall conform to the following:
  - Within the building, all communication spaces shall be separately bonded to each other and connected to the primary building ground in accordance with the provisions of ANSI/TIA 607. The communication ground shall not ground any other equipment or be connected to any potential high voltage source. All racks, frames, drain wires, and all installed communication equipment shall only be grounded to this common reference ground with a minimum size #6 AWG copper wire.
  - The Contractor shall provide, as a minimum, a continuous #3/0 AWG green electrical conductor connected to a 1/4" x 4" x 5.25" telecommunications grounding bus bar (TGB) 6" AFF on the plywood backboard of each IDF (or telecommunication space) to terminate chassis and other equipment grounds.
  - The ground wires from each individual IDF shall be routed directly to the Building Distribution Frame (BDF), terminated and bonded together via a

telecommunications main grounding bus bar (TMGB) of minimum 1/4" x 4" x 12" dimensions. This point of single reference for all closets in a building shall in turn be grounded with a minimum #3/0 AWG ground conductor to the main building ground. If a main building ground is unavailable, the ground wire from the BDF shall be grounded to the nearest electrical panel ground bus bar. The building ground for signal reference shall be the building service entrance ground.

- Riser/Tie Cable Bonding
  - There shall be no bonding between the entry cable and the inside riser or distribution cable.
  - All riser and tie cable shields shall be bonded into a single continuous path end-to-end and grounded on each floor in which pairs leave the sheath. Cable shields shall be grounded to the signal reference ground provided in each telecommunication space.

3 Grounding and Bonding Testing Inspection Procedures

- As an exception to requirements that may be stated elsewhere in these documents, the Inspector of Record shall be given five (5) working days' notice prior to each test. The Contractor shall provide all test equipment and personnel and shall provide written copies of all test results.
- Grounding and bonding system conductors and connections shall be inspected for tightness and proper installation.
- The Contractor shall provide personnel and test equipment for point-to-point resistance tests before connecting equipment. Perform point-to-point tests in each building to determine the resistance between the main grounding system and all BDF/IDF ground bus bars. Investigate and correct point-to-point resistance values that exceed 0.5 ohm. The Contractor shall record resistance measurements at all test point locations.

E Information Outlets

1 General Requirements

- Station outlets shall be mounted securely at work area locations.
- Station outlets shall be located so that the cable required to reach the desktop equipment is no more than 10 feet long.
- Station outlets should not be "daisy-chained."
- Outlets shall be mounted as follows:
  - Wall phone: 48 inches above the finished floor.
  - Standard voice/data outlet: 15 inches above the finished floor.
  - Wall-mounted video outlet: 78 inches above the finished floor.
  - Counter top: 6 inches above the counter top.

2 Modular Furniture Telecommunications Outlets

- The Contractor shall provide and install all components and labor necessary to completely install, test, and document voice and data telecommunications outlets at each modular furniture workstation location.
- Category 6 station cable shall be placed from the BDF, through the riser sleeves, through the cable tray system into the conduit, ceiling or floor poles, etc. into the furniture to be served.
- The Contractor shall coordinate the telecommunications and electrical installation so that the modular furniture is served from the joint signal/power floor monuments or joint power pole in a consistent manner. The Contractor shall provide and install all fittings, flex conduit, adapter plates, and telecommunications cable and components necessary to install Category 6 station cable from the consolidation point box,

through the ceiling or floor monument or pole, into the furniture raceway, and to the final user outlet location (including jacks, adapters, and faceplates).

- The telecommunications installers shall coordinate with the electrical drawings for the number and location of user voice and data outlets.
- Labels shall be numbered according to a scheme developed in consultation with the owner's representative.

## F Grounding and Bonding

- 1 The facility shall be equipped with a Telecommunications Bonding Backbone (TBB). This backbone shall be used to ground all telecommunications cable shields, equipment, racks, cabinets, raceways, and other associated hardware that has the potential to act as a current carrying conductor.
- 2 The TBB shall be installed independent of the building's electrical and building ground and shall be designed in accordance with the recommendations contained in the ANSI/TIA/EIA-607 Telecommunications Bonding and Grounding Standard.
- 3 The main entrance facility/equipment room in each building shall be equipped with a telecommunications main grounding bus bar (TMGB).
- 4 The TMGB shall be connected to the building electrical entrance grounding facility. The intent of this system is to provide a grounding system that is equal in potential to the building electrical ground system. Therefore, ground loop current potential is minimized between telecommunications equipment and the electrical system to which it is attached.
- 5 All racks, metallic backboards, cable sheaths, metallic strength members, splice cases, cable trays, etc. shall be grounded to the respective TGB or TMGB using a minimum #6 AWG stranded copper bonding conductor and compression connectors.
- 6 All wires used for telecommunications grounding purposes shall be identified with a green insulation. Non-insulated wires shall be identified at each termination point with a wrap of green tape.
- 7 All cables and bus bars shall be identified and labeled in accordance with the System Documentation Section of this specification.
- 8 Wall-Mount Busbars
  - Attach busbars to the wall with appropriate hardware according to the manufacturer's installation instructions.
  - Conductor connections to the TMGB or TGB shall be made with two-hole bolt-on compression lugs sized to fit the busbar and the conductors.
  - Each lug shall be attached with stainless steel hardware after preparing the bond according to manufacturer recommendations and treating the bonding surface on the busbar with antioxidant to help prevent corrosion at the bond.
  - The wall-mount busbar shall be bonded to ground as part of the overall Telecommunications Bonding and Grounding System.
- 9 Rack Mount Busbars and Ground Bars
  - When a rack or cabinet supports active equipment or any type of shielded cable or cable termination device requiring a ground connection, add a rack-mount horizontal or vertical busbar or ground bar to the rack or cabinet. The rack-mount busbar or ground bar provides multiple bonding points on the rack for rack and rack-mount equipment.
  - Attach rack-mount busbars and ground bars to racks or cabinets according to the manufacturer's installation instructions.
  - Bond the rack-mount busbar or ground bar to the room's TMGB or TGB with appropriately sized hardware and conductor.
- 10 Ground Terminal Block
  - Every rack and cabinet shall be bonded to the TMGB or TGB.
  - Minimum bonding connection to racks and cabinets shall be made with a rack-mount two-hole ground terminal block sized to fit the conductor and rack and installed according to manufacturer recommendations.

- Remove paint between rack/cabinet and terminal block, clean surface and use antioxidant between the rack and the terminal block to help prevent corrosion at the bond.
- 11 Pedestal Clamp
- At minimum, bond every sixth raised access floor pedestal with a minimum #6 AWG conductor to the TMGB or TGB using a pedestal clamp sized to fit the pedestal and the conductor and installed according to the manufacturer’s recommendations.
  - If pedestal clamps are used to construct a signal reference grid, bond the signal reference grid to the TMGB or TGB and bond each rack and/or cabinet to the signal reference grid using a compression tap or similar non-reversible bonding component sized to fit both conductors.
  - Remove paint between the pedestal and pedestal clamp, clean surface and use antioxidant between the pedestal and the clamp to help prevent corrosion at the bond.
  - Remove insulation from conductors where wires attach to the pedestal clamp.
- 12 Pipe Clamp
- Bond metal pipes located inside the data center computer room with a minimum #6 AWG conductor to the TMGB or TGB using a pipe clamp sized to fit the pipe and the conductor and installed according to the manufacturer’s recommendations.
  - Remove paint between the pipe and pipe clamp, clean surface and use antioxidant between the pipe and the clamp to help prevent corrosion at the bond.
  - Remove insulation from conductors where wires attach to the pipe clamp.
- 13 Equipment Ground Jumper Kit
- Bond equipment to a vertical rack-mount busbar or ground bar using ground jumper according to the manufacturer’s recommendations.
  - Clean the surface and use antioxidant between the compression lugs on the jumper and the rack-mount busbar or ground bar to help prevent corrosion at the bond.

**G Fire Stop System**

- 1 The fire stop system is comprised of the item or items penetrating the fire rated structure, the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure.
- 2 Fire stop systems comprise an effective block for fire, smoke, heat, vapor and pressurized water stream.
- 3 All penetrations through fire-rated building structures (walls and floors) shall be sealed with an appropriate fire stop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper fire stop equipment.
- 4 Fire stop systems shall be UL Classified to ASTM E814 (UL 1479).

**5.8 System Close Out and As-Built Documentation**

**H Documentation**

- 1 Refer to Section 27 0000 ‘4.5-A – Close Out Documentation’ for requirements.

**END OF SECTION**

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**27 1000 – Structured Cabling**

**Part 6 General**

**6.1 Statement of Work**

**A. General**

1. This document describes the requirements for the contractors, products and installation relating to furnishing and installing Telecommunications systems.
2. The Horizontal Cabling System as described in this document is comprised of cabling, infrastructure, J-hook pathways and termination devices for Data systems.
3. Contractor will provide a bid including all labor, materials, tools and equipment required for the complete installation of work called for on the Construction Drawings and described in this Document. It is the responsibility of the Contractor to provide all material necessary to provide a complete and operable system. If the contractor feels that the system described is incomplete they must address this in writing to the Owner/Owner's Representative before providing a bid.
4. All questions concerning non-specified product and services will be address to the Owner's Representative before Contactor provides a bid. Owner expects that by accepting the Contractor's bid proposal that the Contractor has provided a competent bid for a complete solution.
5. Product specifications, general design considerations, and installation guidelines are provided in this document. Quantities of telecommunications outlets, typical installation details, cable routing and outlet types will be provided as an attachment to this document.

**6.2 References**

**A. Regulatory References**

1. Contractors will comply with all requirements as specified in Section 27 0000 '2.1 – Regulatory References'.

**6.3 Safety and Indemnity**

**A. Requirements**

1. Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '3.1 – Safety and Indemnity'.

**6.4 Contractor Qualifications**

**A. Requirements**

1. Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '3.2 – Contractor Qualifications'.

**6.5 Quality Assurance**

**A. Requirements**

1. Contractors shall comply with all requirements as specified in Section 27 0000 '3.3 – Quality Assurance'.

**6.6 Equivalent Products**

- A. All Products described and Part Numbers given in this Specification are those of Panduit unless otherwise noted.
- B. Approved Equals: None at this time.
  1. Contractors wishing to approve a system other than those specified in this document will be required to perform the following:

- Provide System specifications and cutsheets for all system components for the proposed new system(s).
  - Provide an itemized comparison to each of the system functions as described in this specification. Include in that document how the proposed system compares to the specified system described in this document on a line by line basis, using one of the following three criteria: “exceeds”/”matches”/ “unequal”.
- B. All other products than those specifically address in the bid document that the Contractor is seeking approvals for must be **received** by the Owner’s Representative **no later than 10 days before the bid date**. All Approved Equals will be published in addendum form prior to the bid date.
- C. Failure to received written approval for product installed that deviates from the products called for in this specification and/or on the project drawings will result in the contractor having to replace the unapproved materials and equipment with the originally specified products at no additional cost to the Owner.
- D. All proposed system documentation must be sent to the Owner’s Representative via one of the following; mail, fax or email. The Contractor will include the project name, their contact information, and the specification section number that the proposed system is comparable to.

Infinity Communications and Consulting, Inc.  
 4909 Calloway Dr  
 Bakersfield, Ca. 93312  
 (661) 716-1840 Phone  
 (661) 716-1841 Fax  
[P2bids@infinitycomm.com](mailto:P2bids@infinitycomm.com) Email

**6.7 Technology Clause**

- A. As technology advances, it is understood that improved or enhanced products may supersede existing products in both price and performance and yet be essentially similar. This request for bids seeks to address the rapid advances in technology by allowing functionally similar or identical products that may be introduced in the future, during the term of this bid, to be included under the general umbrella of compatible product lines and are thus specifically included in this bid document.
- B. Discontinued or end of life products shall be replaced with an equal product to the original specified product at no additional costs to the owner.
- C. Some components listed below may not be 100% eligible for E-rate. Contractor shall cost allocate these components based on School’s and Libraries’ Eligible Services List.
- D. E-rate Eligibility is based on School’s and Libraries’ Eligible Services List. It is the bidder’s responsibility to verify with USAC the eligibility of all components in the project.

**6.8 Submittal Documentation**

- A. Requirements
1. The successful contractor shall provide their submittal package in accordance with the Section ‘01 20 00 – Submittal Schedule’ and Section 27 0000 ‘4.2 – Submittal Documentation’.

**6.9 Acceptance**

- A. Requirements
1. The contractor shall comply with all requirements as listed in Section 27 0000 ‘4.3 – Acceptance’.

**6.10 Warranty**

- A. Requirements
1. The contractor shall comply with all requirements as listed in Section 27 0000 ‘4.4 – Warranty’.

## Part 7 Products

### 7.1 Work Area Subsystem

#### A. General

1. The work Area Subsystem shall consist of the connectivity equipment used to connect the horizontal cabling subsystem and the equipment in the work area. The connectivity equipment shall include the following options:
  - Patch Cords
  - Modular Inserts and Jacks
  - Faceplates

#### B. Patch Cords

1. Category 6 Data/Voice Outlet Patch Cords
  - All category 6 channel patch cords shall be constructed with a snagless boot, made of molded PVC, colored matched to the color of the patch cord cable.
  - All category 6 channel patch cords shall be constructed with category 6 patch cable, 24 AWG, 7/32 tinned copper stranded patch cable, insulated with polyethylene and paired, jacketed with PVC, ETL Verified for ISO 11801, (UL) NEC type CM or CMR, 75° C, Article 800 CSA Type CMG.
  - All category 6 channel patch cords shall be 100% factory tested to pass return loss (RL) and near-end cross talk (NEXT).
  - All category 6 channel patch cords shall be manufactured using a T568-B plug-wiring format.
  - All patch cords will be delivered to the site and must be signed for by the Owner/Owner's Representative. It will be the responsibility of other to install all Work Area Data Patch Cords. Contractor will verify quantity of patch cords prior to ordering.
  - Color: Data Patch Cords will be: see below
  - Quantity: Contractor will provide one patch cord for every outlet cable shown on the drawings. Contractor will verify quantity prior to installation.
  - Data and Voice patch cords will be ten (15) feet in length.
  - **Color:**
  - Data Patch Cords will be **BLUE**
  - Voice Patch Cords will be **WHITE**
  - **Quantity:** Contractor will provide one patch cord for every outlet cable shown on the drawings.
  - **Part#:** Siemon
  - Data Patch Cord, MC6-15-06-28
  - Voice Patch Cord, MC6-15-02-28

#### **WIRELESS DATA ONLY**

2. Category 6 Data Outlet Patch Cords
  - All category 6 channel patch cords shall be constructed with a snagless boot, made of molded PVC, colored matched to the color of the patch cord cable.
  - All category 6 channel patch cords shall be constructed with category 6 patch cable, 24 AWG, 7/32 tinned copper stranded patch cable, insulated with polyethylene and paired, jacketed with PVC, ETL Verified for ISO 11801, (UL) NEC type CM or CMR, 75° C, Article 800 CSA Type CMG.
  - All category 6 channel patch cords shall be 100% factory tested to pass return loss (RL) and near-end cross talk (NEXT).
  - All category 6 channel patch cords shall be manufactured using a T568-B plug-wiring format.

- All patch cords will be delivered to the site and must be signed for by the Owner/Owner’s Representative. It will be the responsibility of the Owner to install all ‘Patch Cords’.
  - Wireless Access Point patch cords will be three (3) feet in length.
  - **Colors:**
- WAP YELLOW
  - **Quantity:** Contractor will provide one (1) patch cord for every outlet cable shown on the drawings.
  - **Part Number:** Siemon
- WAP MC6-03-05-28

C. Modular Inserts and Jacks

1. Category 6 Data/Voice Jack & Wireless Jack
  - Jack will meet the Category 6 Standard.
  - Jacks shall be 8 position un-keyed
  - Jacks shall utilize a 2 layer printed circuit board to control NEXT
  - Jack termination shall follow the industry standard 110 IDC.
  - Jacks shall have a designation indicating Category 6 on the nose which can be plainly seen from the front of the faceplate. Bottom of jack shall have date code and a abbreviated catalog number.
  - Jacks shall utilize a paired punch down sequence. Cable pair twists shall be maintained up to the IDC, terminating all conductors adjacent to its pair mate to better maintain pair characteristics designed by the cable manufacturer.
  - Jacks shall terminate 22-26 AWG stranded or solid conductors.
  - Jacks shall be compatible with single conductor 110 impact termination tools.
  - Jacks shall be compatible with TIA/EIA 606 color code labeling
  - Jacks shall have universal wiring designation.
  - Jacks shall have an attached color coded wiring instruction label housed between the IDC termination towers.
  - Jacks shall be manufactured in the USA
  - Jacks will be terminated according to the T568B wiring scheme.
  - Quantity: Contractor will provide one jack for every outlet cable shown on the drawings.
  - **Color:**
    - Data Jacks will be **BLUE**
    - Voice Jacks will be **WHITE**
    - Wireless Jacks will be **Yellow**
  - **Quantity:** Contractor will provide one jack for every outlet cable shown on the drawings.
  - **Part#:** Siemon
    - Data Jack, MX6-06
    - Voice Jack, MX6-02
    - Wireless Jack, MX6-05

D. Wall Mount and Modular Furniture Faceplates

1. Wall Plates
  - Faceplates shall be UL Listed and CSA Certified
  - Faceplates shall be 2.75" W x 4.5" H (69.8 mm x 114.3 mm)
  - Faceplates shall provide for TIA/EIA 606 compliant station labeling.
  - Faceplates shall have plastic covers over the mounting screws that can be replaced with a clear plastic window over a printable paper insert.
  - **Color:** Faceplate to be **WHITE**

- **Quantity:** Contractor will provide one single gang faceplate for each outlet shown on the drawings.
  - **Part#:**  
 6 Port Face Plate, PN# MX-FP-S-06-02  
 4 Port Face Plate, PN# MX-FP-S-04-02  
 2 Port Face Plate, PN# MX-FP-S-02-02  
 Single port faceplates will not be allowed.
2. Blank Insert
    - **Color:** Blank Insert to be **WHITE**
    - **Quantity:** Contractor will provide one insert for every unused port in a faceplate.
    - **Part#:** MX-BL-02
  3. Telephone Wall Plates
    - Faceplate shall be a two piece design, including a steel base and a stainless steel cover plate.
    - Faceplates steel base shall incorporate six screw terminals, one 6 position jack and an insulating plastic sleeve.
    - Faceplate shall be equipped with screw studs to be used as the mounts for wall hung telephones.
    - **Color:** Faceplate to be **STAINLESS STEEL**
    - **Quantity:** Contractor will provide one faceplate for each Intercom Handset outlet shown on the drawings.
    - **Part#:** PN# MX-WP-K6-SS
  4. Blank Wall Plates
    - Faceplate shall be constructed from stainless steel.
    - Faceplates shall be UL Listed and CSA Certified
    - Faceplates shall be 2.75" W x 4.5" H (69.8 mm x 114.3 mm) for single gang.
    - **Color:** Faceplate to be **STAINLESS STEEL**
    - **Quantity:** Contractor will provide one faceplate for each unused data/voice/video/intercom outlet shown on the drawings.
    - **Part#:** Equal to Hubbell Wiring Device, PN# S13
  5. Surface Mount Raceway Insert  
 Inserts for Wiremold's 4050, 5450 and 5550 Device Mounting Brackets
    - Insert shall allow for two category 6 jacks to be mounted flush.
    - Insert shall match the color of the Raceway installed.
    - **Color:** Faceplate to be **WHITE**
    - **Quantity:** Contractor will provide one 2port insert for each outlet in the Surface Mount Raceway shown on the drawings.
    - **Part#:** Equal to Wiremold, PN# 5507FRJ-WH

## 7.2 Horizontal Distribution Cabling

### A. General

1. The horizontal distribution cabling system is the portion of the telecommunications cabling system that extends from the Work Area (WA) telecommunications outlet/connector to the Horizontal Cross Connect (HC) in the telecommunications room (TR).
2. The Horizontal Distribution Cabling consists of the following:
  - Copper Support System
  - Copper Station Cable

B. Cabling Support System

1. J-Hooks

- Cable supports shall provide a bearing surface of sufficient width to comply with required bend radii of high performance cables: cULus Listed.
- Cable supports shall have flared edges to prevent damage while installing cables.
- Cable support system shall provide fasteners that allow them to be mounted to wall, concrete, joist, tee-bar wire, treaded rod, beams and raised floor supports.
- Fasteners shall have the ability to either be factory or jobsite assembled; rated for indoor use in non-corrosive environments; cULus Listed.
- Fastener to be installed with one continuous cable support, factory or jobsite assembled.
- **Color:** N/A
- **Quantity:** Contractor will provide quantities of j-hooks and hanger accessories in the amount necessary to support all horizontal cabling every 48 inches. See drawings for j-hook pathways.
- **Part Number:** Equal to:

Panduit Part Number	Description
JP75W-L20^	J Hook for wall mount applications. One 1/4" (M6) mounting hole for user supplied screw.
JP75WP2B-L20^	J Hook for powder actuated installation on walls. One 5/32" (M4) mounting hole for user supplied fasteners.
JP131W-L20	J Hook for wall mount applications. One 1/4" (M6) mounting hole for user supplied screw.
JP131WP2B-L20	J Hook for powder actuated installation on walls. One 5/32" (M4) mounting hole for user supplied fasteners.
JP2W-L20^‡**	J Hook for wall mount applications. One 1/4" (M6) mounting hole for user supplied screw.
JP2WP2B-L20^	J Hook for powder actuated installation on walls. One 5/32" (M4) mounting hole for user supplied fasteners.
JP4W-X20^‡**	J Hook for wall mount applications. One 1/4" (M6) mounting hole for user supplied screw.
JP4WP2B-X20	J Hook for powder actuated installation on walls. One 5/32" (M4) mounting hole for user supplied fasteners.

- \*\*Suitable for use in air handling spaces in accordance with Sec. 300.22(c) and (d) of the National Electrical Code when mounted as single units or in pairs. JP4 family of parts suitable for use in single unit configurations only. Listed in accordance with CAN/ULC S102.2 when mounted as single units or in pairs. Maximum spacing of 4' (1220mm) required between mount points. (Flame Spread Rating = 0, Smoke Developed Classification = 20) ^ Available in red. Replace -L20 with -L2 or -X20 with -

X2 in part number suffix. ‡ Available in blue. Replace -L20 with -L6 or -X20 with -X6 in part number suffix

C. Copper Station Cable

1. Category 6 Data/Voice Unshielded Twisted Pair (UTP) Cable

- Cable will meet or exceed the proposed requirements of ANSI/TIA/EIA 568-B.2, 568-B.2 Addendum #1 and ISO/IEC 11801 Category 6 Cable Standard for: NEXT and ELFEXT (Pair-To-Pair and Power Sum), Insertion Loss (Attenuation), Return Loss, and Delay Skew.
- Cable shall be proven to support Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, IEEE 802.3af Power Over Ethernet for VoIP, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps, 1.2 and 2.4 Gbps.
- The cable shall consist of four unshielded twisted pairs of thermoplastic insulated bare copper enclosed in a thermoplastic jacket.
- All cable shall conform to the requirements for communications circuits defined by the National Electrical Code (Article 800) and the Canadian Building Code. Cable listed to NEC Article 800-51(a) will be used for “Plenum” installations. Cable listed to NEC Article 800-51(b) shall be installed in vertical runs penetrating more than one floor.
- Cable shall have been certified with the UL 1666 Vertical Tray Flame Test.
- Cable shall be available in a Plenum, Riser and Indoor/Outdoor rated jackets.
- Contractor will use the indoor/outdoor rated cable for all locations where the cable pathway goes underground and/or run in exterior conduit.
- The listed Category 6 cables in this specification are manufactured by Siemon or BERK-TEK. NO other manufactures eligible for a Siemon *Certified Installation* have been pre-approved.
- **Color:**  
Data cable jacket will be **BLUE**
- **Quantity:** See Drawing for quantity and installation details.
- **Part#:** Siemon or equal by Berk-Tek  
For Riser Application:  
Siemon, PN# 9C6R4-E3-06-RXA  
Berk-Tek, PN# 10032455  
  
For Plenum Application:  
Siemon, PN# 9C6P4-E3-06-RXA  
Berk-Tek, PN# 10032094  
  
For Indoor/Outdoor Application:  
Berk-Tek, PN# 10139885 (all cable jackets will be **BLACK**)

7.3 Backbone Cabling

A. General

1. The backbone cabling system is the portion of the telecommunications cabling system that extends from the Main Cross Connect (MC) to each Horizontal Cross Connect (HC).
2. The Backbone Cabling system includes:
  - Fiber Optic Backbone Cabling
  - Copper Backbone Cabling

B. Fiber Optic Backbone Cabling

1. Data System Backbone Cabling
  - Cable shall be UL/cUL OFNR/OFN FTA rated and be Flame Resistant in accordance with the UL 1666.
  - Cable shall an indoor CMR/CMP rated jacket.
  - Cable shall be constructed utilizing a loose tube design.
  - Cable will maintain the following:
    - Crush Resistance (EIA-455-41) = 2000 N/cm
    - Impact Resistance (EIA-455-25) = 2000 Impacts w/1.6 N-m
    - Min Bend Radius:
      - Long Term - No Load = 15x Cable diameter
      - Short Term – Load = 20x Cable diameter
    - Operating Temp. = -40°C to +70°C
    - Storage Temp. = -40°C to +80°C
  - Cable shall be constructed of 50/125µ Laser Optimized rated glass capable of:
    - 1 Gigabit Ethernet Link at 1000m/600m (@850nm/1300nm)
    - 10 Gigabit Ethernet Link at 300m/300m (@850nm/1300nm)
  - The Fiber Optic Cable in this specification is manufactured by BERK-TEK. NO other manufactures eligible for Siemon *Certified Installation* that meet and/or exceed the below specifications have been pre-approved.
  - **Color:** Fiber Optic cable jacket will be **Aqua**
  - **Quantity:** See Drawing for quantity and installation details.
  - **Part#:** Siemon or Equal by Berk-Tek

Riser 6 Strand Fiber

Siemon, PN # 9BB5R006D-T512A

Riser 12 Strand Fiber

Siemon, PN # 9BB5R012G-T512A

Riser 24 Strand Fiber

Siemon, PN # 9BB5R024D-T512A

Equal by BERK-TEK, PN# PDRO24-FB3010/F5

*\*Provide four Field Breakout Kits, BERK-TEKPN# 10033625, for each Fiber Optic Cable run.*

Plenum 6 Strand Fiber

Siemon, PN # 9BB5P006D-T512A

Plenum 12 Strand Fiber

Siemon, PN # 9BB5P012G-T512A

Plenum 24 Strand Fiber

Siemon, PN # 9BB5P024D-T512A

Equal by BERK-TEK, PN# PDPO24-FB3010/F5

*\*Provide four Field Breakout Kits, BERK-TEKPN# 10033625, for each Fiber Optic Cable run.*

## 7.4 Telecommunications Room

### A. General

1. The Telecommunications Room (TR) includes those products that terminate horizontal and backbone cabling sub-systems and connect them to the network equipment.
2. The Telecommunications Room equipment includes:
  - Copper Patch cords
  - Fiber Optic Patch Cords
  - Horizontal Cabling Termination Equipment
  - Backbone Cabling Termination Equipment
  - Cabinets, Racks, and Enclosures
  - Cable Support System
  - Ground and Bonding Equipment

### B. Copper Patch Cords



1. Category 6 Data/Voice & Wireless TR Patch Cords

- TR Copper Patch Cords shall comply with those specified in **2.1 Work Area Subsystem, A. Patch Cords, 1. Category 6 Data Outlet Patch Cords**
- *All patch cords will be delivered to the site and must be signed for by the Owner/Owner's Representative. It will be the responsibility of other to install all TR Data and Voice Patch Cords.*
- **Color:**  
Data Patch Cords will be **BLUE**  
Voice Patch Cords will be **WHITE**  
Wireless Patch Cords will be **Yellow**
- **Quantity:** Contractor will provide one patch cord for every data and voice outlet cable shown on the drawings. Contractor will provide the quantity of different length patch cords as follows:  
For the HC's, Contractor will provide 80% of patch cords will be 3 ft. and 20% of patch cords will be 1ft.  
For the MC, Contractor will provide 40% of patch cords will be 3 ft., 40% of patch cords will be 6ft., and 20% of patch cords will be 10ft.
- **Part#:**  
Data Patch Cords  
1 foot Data Patch Cord, MC6-01-06-28  
3 foot Data Patch Cord, MC6-03-06-28  
6 foot Data Patch Cord, MC6-06-06-28  
10 foot Data Patch Cord, MC6-10-06-28  
  
Voice Patch Cords  
1 foot Voice Patch Cord, MC6-01-02-28  
3 foot Voice Patch Cord, MC6-03-02-28  
6 foot Voice Patch Cord, MC6-06-02-28  
10 foot Voice Patch Cord, MC6-10-02-28  
  
Wireless Patch Cords  
1 foot Voice Patch Cord, MC6-01-05-28  
3 foot Voice Patch Cord, MC6-03-05-28  
6 foot Voice Patch Cord, MC6-06-05-28  
10 foot Voice Patch Cord, MC6-10-05-28

C. Fiber Patch Cords

1. Multi-Mode Fiber Patch Cords

- Patch Cords shall be a Duplex LC to LC 50/125µm "Laser Optimize" Graded-Index Multimode Fiber Patch Cord.
- All patch cords shall be factory polished and 100% optically tested for superior performance.
- Cables shall have a Mated Pair MM Insertion Loss of less than 0.60 dB (0.25 dB Typical).
- Cable Retention: > 25 pounds
- All optical, mechanical and environmental performance shall meet and/or exceed the TIA/EIA-568-B.3 specifications.
- Fiber patch cords will be 1 meter long.
- **Color:** NA
- **Quantity:** Contractor will provide two fiber patch cords for every fiber optic backbone cable run shown on the drawings.
- **Part#:** FJ2-LCLC5L-01AQ

D. Horizontal Cable Termination Equipment

1. Copper Termination Equipment – Category 6

- Panels shall be made of black anodized aluminum in 24 and 48 port configurations.
- Panels shall have optional rear cable support bar for strain relief. Cable support bar shall attach to the rear of the patch panel itself without the use of additional fasteners or screws.
- Panels shall have clear label holders and white designation labels provided with the panel for each row of 24 ports.
- Panels shall be ANSI/EIA-568-C.1 and ISO/IEC 11801 category 6 compliant.
- Panels shall be UL Listed 1863 and CSA certified
- Panels shall be made by and ISO 9002 certified manufacturer.
- **Color:** Patch panel shall be **BLACK**
- **Quantity:** The number of patch panels to be supplied shall be derived by multiplying the number of category 6 cables being terminated at the individual TR by 1.25 and providing additional panel in the nearest 24 port increment.
- **Part Number: Siemon**  
 24 port Category 6 Patch Panel, HD6-24  
 48 port Category 6 Patch Panel, HD6-48  
 Patch Panels will utilize the jacks noted in Section 2-2.1-C of this

E. Backbone Cable Termination Equipment

1. Fiber Termination Panels

- Panels shall be constructed of cold rolled 16 ga. steel with a black powder paint finish and provide for fully enclosed fiber patching and termination.
- Panels shall have a removable smoked Plexiglas front cover with optional lock kit. The panel shall have a removable top, front and rear covers. The panel adapter tray shall be removable from the front of the panel by sliding the tray forward. Panels shall come with rack mounting brackets that allow it to be mounted with the front cover flush with the front of the rack, or with the front of the panel extended 5.0” in front of the rack.
- Panels shall be one (1), two (2) or four (4) rack spaces, accepting up to twelve (12) adapter panels.
- Adapter panels shall be available with LC multi-mode cassettes. Adapter shall have a zirconia alignment sleeve.
- Panel shall have a splice tray mounting stud incorporated into the base for mounting of mechanical or fusion splice trays. Adapter tray shall have cable management anchor points and come with cable anchors allowing for the maintenance of the incoming cable with the proper minimum bend radius.
- Panels shall have four cable entrance ports on the top and 2 on the bottom, which are covered by knock outs. Panels shall have two jumper ports in the bottom at the front of the panel with plastic dust covers for routing of jumpers.
- **Color:** Fiber Panel will be BLACK
- **Quantity:** See Drawing for quantity and installation details.
- **Part Number: Siemon**  

1RU	Up to 72 LC Fibers	FCP3-DWR
2RU	Up to 144 LC Fibers	RIC3-36-01
4RU	Up to 288 LC Fibers	RIC3-72-01
- Provide FLEX-OPTI-1RU & FAPB for each enclosure required, quantity will be determined by the amount of fiber optics in each location. Provide as required.

2. Fiber Terminations  
 Fiber Optic Cassette

- 12 Fiber
- LC Cassette w/discrete pigtails
- ETL Tested per TIA/EIA-568-B.3
- MM Mated Pair Insertion Loss: <0.5dB (0.25dB typical)
- Return Loss: <-20dB
- Operating temperature: 0-60°C
- Materials:
  - Connector ferrule: Zirconia ceramic
  - Connector body/nut: Nickel plated brass/zinc or polymer
- Crimp insert/crimp tube: Nickel plated brass/thermoplastic elastomer polymer
- Dust cap: Nylon or PVC
- Strain relief boot: Flame retardant (UL-Rated 94-V0) polymer
- **Color:** NA
- **Quantity:** See Drawing for quantity and installation details.
- **Part Number: Siemon**
  - RSC12-LCP5VA-B1

F. Cabinets, Racks, and Enclosures

Contractor will provide the following 'MC', 'IC', 'HC' Enclosures and components based on the number of cables to that will be terminated:

1. Floor Mount Cabinets (IDF Type B)

- The cabinet frame shall be constructed of a aluminum frame and steel components – top/bottom, and left/right welded to form a self supporting framework. The cabinet shall provide adequate ventilation for the enclosed equipment.
- Floor Mount cabinet will include all of the following components: front and rear doors, side panels, top panel, and 2 sets of rack rails.
- The floor mount cabinet shall be modular. The front/rear door and side panels shall be removable to allow for easier access.
- Front and rear doors shall be able to be mounted to allow doors to swing open to the right or the left.
- Vertical wire basket shall be included with each cabinet. The vertical wire basket installs in the cabling area on the interior sides of the cabinet. Plastic cable drop outs shall be provided as required.
- Can be delivered partially assembled
- Adjustable mounting rails RMU marked and numbered
- UL Listed
- MegaFrame Width: 27.3" (19" EIA)
- MegaFrame Height: 84" (45 RMU)
- MegaFrame Depth: 39"
- Equipment Load Bearing Capacity: 2,000 lb
- Construction: Bolted Aluminum
- **Color:** Floor Mount Cabinet will be or **BLACK**
- **Quantity:** See Drawing for quantity and installation details.
- **Part#:**
  - Floor Mount Cabinet
  - M1043-741 19" EIA x 45 RMU X 39"D 276 lb

Fan Kit  
12480-701

Equipment Mounting Hardware

76543-X01 M6 Cage Nuts/Screws (25) 1 lb  
 76544-X01 #12-24 Cage Nuts/Screws (25) 1 lb  
 76545-X01 #10-32 Cage Nuts/Screws (25) 1 lb

Grounding Kit

10610-019

Horizontal Wire Management

1U PN# 30529-719

2U PN# 30530-719

Power Distribution Unit

- 13239-755

2. Floor Mount Cabinets with Cooling (IDF Type D)

- The cabinet frame shall be constructed of a aluminum frame and steel components – top/bottom, and left/right welded to form a self supporting framework. The cabinet shall provide adequate ventilation for the enclosed equipment.
- Floor Mount cabinet will include all of the following components: front and rear doors, side panels, top panel, and 2 sets of rack rails.
- The floor mount cabinet shall be modular. The front/rear door and side panels shall be removable to allow for easier access.
- Front and rear doors shall be able to be mounted to allow doors to swing open to the right or the left.
- Vertical wire basket shall be included with each cabinet. The vertical wire basket installs in the cabling area on the interior sides of the cabinet. Plastic cable drop outs shall be provided as required.
- Can be delivered partially assembled
- Adjustable mounting rails RMU marked and numbered
- UL Listed
- Liebert Width: 23.5" (19" EIA)
- Liebert Height: 77" (42 RMU)
- Liebert Depth: 38"
- Equipment Load Bearing Capacity: 2,000 lb
- Construction: Bolted Aluminum
- **Color:** Floor Mount Cabinet will be or **BLACK**
- **Quantity:** See Drawing for quantity and installation details.
- **Part#:**

Floor Mount Cabinet

HD788CC00KA5718

**Features Include:**

**Mounting Frame**

- Unit dimensions: 38" D x 78" H
- NEMA12 Sealed
- Heavy duty 12-gauge steel construction, painted black. Includes leveling feet & grounding lug.

**Internal Mounting Rails**

- Full height, adjustable position, EIA hole/spacing.
- Front / Rear Rails - 2 sets (left / right) mounting rails

**Cooling Options**

**ECM (Environmental Cooling Module) Cooling Systems & Options**

- ECM Self-contained primary air conditioner. Low noise operation, automatic condensate reevaporation system, hot gas by-pass.
- ECM Low Noise, Rack Mount, 60Hz - Load matched to 2000VA UPS

**BCM (Back-up Cooling Module) Cooling Systems & Options**

- BCM Self-contained back-up cooling system. Low noise operation, mounted on BCM rear door, High Temp. alarm activated.
- BCM2000 Low Noise 60 Hz - Load matched to 2000VA UPS

**MCR Options**

- Side Panels - Sheetmetal Insulated construction. Externally removable with internal security provisions.
- Door and Side Panel Color - ZP-7021 Black Gray Matte

**General MCR Options**

- Casters - Non-locking, rated 1000 lb. total

**Monitoring Options**

- High Temperature Alarm - Audible alarm, Controller for BCM option

**Upgrade Packages**

**Upgrade - ECM (Environmental Cooling Module) Cooling Systems & Options**

- One (1) ECM Heat Rejection Duct 60Hz - Ship loose - field installed.

**Services:**

- ECM, 3 Year Extension – 3WEECM

ECM (Environmental Cooling Module)

ECM2000LR-C60

- **Accessories**

Equipment Mounting Hardware

- 76543-X01 M6 Cage Nuts/Screws (25) 1 lb
- 76544-X01 #12-24 Cage Nuts/Screws (25) 1 lb
- 76545-X01 #10-32 Cage Nuts/Screws (25) 1 lb

Grounding Kit

10610-019

Horizontal Wire Management

- 1U PN# 30529-719
- 2U PN# 30530-719

Power Distribution Unit

- 13239-755

3. Floor Mount Racks (IDF Type C)

- Floor Mount Racks shall be UL Listed and constructed using 60630-T6 extruded aluminum.
- Rack shall have a black polyurethane finish.
- Rack base shall be pre-drilled for securing rack to the floor.
- Rack rails shall be spaced for 19" mounting rail-to-rail and shall be of a U shaped construction with 12/24 pre-tapped holes in the EIA-310-D standard hole pattern providing 48 rack spaces on both the front and rear. Rails shall have a universal side drilling pattern to allow racks to be bolted together or attachment of accessories.
- Rack shall provide for a grounding point per the TIA/EIA 607-A.
- Rack shall have a minimum of 48 rack spaces.
- Rack height shall be 90" (7'-6")
- Rack shall support 1500lbs of equipment.
- OSHPD Pre-Approved # OPA-0845
- **Color: BLACK**
- **Quantity:** See Drawing for quantity and installation details.
- **Part#: Chatsworth Products Inc.**  
Floor Mount 2-Post Open Frame Rack

46353-705

Vertical Wire Managers

11729-703

Cable Runway Wall to Rack Kit

11911-712

Cable Runway-to-Rack Mounting Plate

12730-712

Grounding Kit

10610-019

Horizontal Wire Management

1U PN# 30529-719

2U PN# 30530-719

Power Distribution Unit

- 13239-755

4. Wall-mounted cabinets (IDF Type A)

- Wall-mounted cabinets shall be manufactured from steel sheet.
- Each cabinet will have a rear panel that attaches to the wall, a hinged cabinet body that swings open from the rear panel providing easy access to the rear of equipment and a locking front door.
- The rear panel will provide cable access with pre-punched knockouts, up to 3", for conduit along the top and bottom edges of the panel. There will also be cutouts in the back of the rear panel so that cables can enter the panel through the wall. The rear panel will provide attachment points for accessory equipment mounting brackets and cable tie points within the panel (cabinet).
- The cabinet body will include a single pair of vertical 19" EIA equipment mounting rails. The mounting rails will be EIA-310-D compliant with the Universal hole pattern. Mounting holes will have #12-24 threads.
- Mounting rails will be adjustable in depth so that they can be positioned at any point within the cabinet body. The design of all cabinets will allow an additional pair of mounting rails (for a total of two pairs of mounting rails per cabinet) to be added to the cabinet.
- The wall-mount cabinet shall provide a hinge design that attaches the cabinet body and the rear panel and allow the rear panel to be removed during installation. The hinge design will allow the cabinet body to open at least 90°. The hasp used to secure the rear panel and the cabinet body together will assist in drawing the components together during the locking action.
- The cabinet body will include vents that are designed to accept fan kits.
- The front door will be hinged and locking. The front door and rear panel will be keyed alike. The cabinet body will allow the front door to be attached so that it will swing open from the right or left. The cabinet manufacture shall provide an option for a solid or a tinted plexi-glass window front door. The plexi-glass in doors shall be bronze acrylic (not clear) with a UL flammability classification of 94HB or better.
- Finish shall be powder coat (paint).

- The cabinet shall have the option of being delivered fully assembled. All cabinets will include installation hardware (hex lag screws) for wood studs and 50 each #12-24 equipment mounting screws.
- Load bearing capacity for cabinets that wall-mount will be a minimum of 300 pounds per cabinet.
- Cabinets that are wall-mount only will be certified and UL Listed to standard UL 60950 under category NWIN.
- **Color:** Wall Mount Cabinet will be **BLACK**
- **Quantity:** See Drawing for quantity and installation details.
- **Part Number: Chatsworth Products Inc.**  
 Cube-iT - 12419-724  
 Cube-iT - 12419-736
- **Accessories** (Provide for each cabinet shown)  
 Power Strip - 13239-755  
 Dual Fan/Filter Kit - 40975-001  
 LED Light Kit - 12803-701

G. Cable Support System

1. Telco Backboards

- Backboards shall be 4' x 8' x .75" void free plywood (ACX Plywood with the "A" side turned out).
- The plywood shall be painted with two coats of white fire-retardant paint.
- Cut full size sheet to required size for application type, minimum 6" larger than equipment installed.

2. Ladder Rack Cable Runway

- Stringers shall be fabricated from 16Aga .375" x 1.5" Cold Rolled Steel tubing.
- Rungs shall be fabricated from 16Aga .5" x 1.0" Cold Rolled Steel tubing
- Rungs shall be spaced at 9.0" center to center
- A straight length of ladder shall be capable of supporting 45 pounds per foot when a 10' length is tested according to NEMA VE-1.
- Ladder Rack shall have a powder coat finished.
- Ladder Rack shall be available in standard 6ft. and 10ft. lengths.
- Ladder rack shall be a part of a total system that includes: manufacture bends, wall supports, joining hardware, etc.
- Ladder Rack shall be grounding per the ANSI/TIA/EIA 607-A.
- **Color:** Black
- **Quantity:** See Drawings for quantity and installation details
- **Part Number: Equal to Chatsworth Products Inc.:**
  - 12" W 10250-712
  - 18" W 10250-718
  - 24" W 10250-724
- Contractor shall include all accessories for a finished product, including the following, as required:
  - 16301-001 Butt Splice Kit
  - 16302-001 Junction Splice Kit
  - 40164-025 Ground Strap Kit (Pack of 25)
  - 11959-715 Corner Bracket
  - 12100-706 Radius Drop 6" W (as required)
  - 11746-712 Triangle Wall Support
  - 11746-718 Triangle Wall Support
  - 11746-724 Triangle Wall Support

- 11421-712 Wall Support, End
- 11421-718 Wall Support, End
- 11421-724 Wall Support, End
- 10506-702 Elevation Kit for 2-Post Racks
- 10506-706 Elevation Kit for 2-Post Racks

3. Fiber Management

- Construction:
  - 24 inch diameter steel ring stores fiber slack using Velcro fasteners at regular intervals around ring.
  - Screw fastens to backboard at BDF or IDF.
    - **Color:** Black
    - **Quantity:** See Drawings for quantity
    - **Part Number:** Equal to **Panduit**
- WMFS24

H. Grounding and Bonding

1. Telecommunications Main Grounding Busbar (TMGB)

- Telecommunications Main Grounding Busbar (TMGB) shall be constructed of .25" (6.4 mm) thick solid copper bar.
- The busbar shall be 4" (100 mm) high and 12" (300 mm) long and shall have 18 attachment points (two rows of 9 each) for two-hole grounding lugs.
- The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 15 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4 mm) hole centers.
- The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall.
- The busbar shall be UL Listed as grounding and bonding equipment.
- **Color:** N/A
- **Quantity:** As required.
- **Part Number:** Equal to **Cooper B-line**
- SBTMGB12K, 12" x 4" (300 mm x 100 mm) Telecommunications Main Grounding Busbar, UL Listed.

2. Telecommunications Grounding Busbar (TGB)

- Telecommunications Grounding Busbar (TGB) shall be constructed of .25" (6.4 mm) thick solid copper bar.
- The busbar shall be 2" (50 mm) high and 10" (250 mm) long and shall have 7 attachment points (one row) for two-hole grounding lugs.
- The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 4 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4 mm) hole centers.
- The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall.
- The busbar shall be UL Listed as grounding and bonding equipment.
- **Color:** N/A
- **Quantity:** As required.
- **Part Number:** Equal to **Cooper B-line**
- SBTGBK, 10" x 2" (250 mm x 50 mm) Telecommunications Grounding Busbar, UL Listed.

3. Horizontal Rack Busbar

- Horizontal rack-mount busbar shall be constructed of 3/16" (4.7 mm) thick by 3/4" (19.1 mm) high hard-drawn electrolytic tough pitch 110 alloy copper bar.



- Bar shall be 19" EIA or 23" rack mounting width (as specified below) for mounting on relay racks or in cabinets.
  - Each bar shall include a copper splice bar of the same material (to transition between adjoining racks) and two each 12-24 x 3/4" copper-plated steel screws and flat washers for attachment to the rack or cabinet.
  - Bar shall be UL Listed as grounding and bonding equipment.
  - **Color:** N/A
  - **Quantity:** As required.
  - **Part Number:** Equal to **Cooper B-line**
  - SBH119K, Ground Bar for 19" Rack.
4. Two Mounting Hole Ground Terminal Block
- Ground terminal block shall be made of electroplated tin aluminum extrusion.
  - Ground terminal block shall accept conductors ranging from #14 AWG through 2/0.
  - The conductors shall be held in place by two stainless steel set screws.
  - Ground terminal block shall have two 1/4" (6.4 mm) holes spaced on 5/8" (15.8 mm) centers to allow secure two-bolt attachment to the rack or cabinet.
  - Ground terminal block shall be UL Listed as a wire connector.
  - **Color:** N/A
  - **Quantity:** As required.
  - **Part Number:** Equal to **Cooper B-line**
  - SB47801 through SB47804, Two Mounting Hole Ground Terminal Block, 1 each
5. Compression Lugs
- Compression lugs shall be manufactured from electroplated tinned copper.
  - Compression lugs shall have two holes spaced on 5/8" (15.8 mm) or 1" (25.4 mm) centers, as stated below, to allow secure two bolt connections to busbars.
  - Compression lugs shall be sized to fit a specific size conductor, sizes #6 to 4/0, as stated below.
  - Compression lugs shall be UL Listed as wire connectors.
  - Design Make shall be:
  - Cooper B-Line,
  - Compression Lugs: SB47901 through SB47907
6. Antioxidant Joint Compound
- Oxide inhibiting joint compound for copper-to-copper, aluminum-to-aluminum or aluminum-to-copper connections.
  - **Color:** N/A
  - **Quantity:** As required.
  - **Part Number:** Equal to **Cooper B-line**
  - 40168-101, Antioxidant Joint Compound, Copper-to-Copper Connections, .5 oz, 1 each.
7. Equipment Ground Jumper Kit
- Kit includes one 24"L insulated ground jumper with a straight two hole compression lug on one end and an L-shaped two hole compression lug on the other end, two plated installation screws, an abrasive pad and a .5 ounce tube of antioxidant joint compound.
  - Ground conductor is an insulated green/yellow stripe #6 AWG wire
  - Lugs are made from electroplated tinned copper and have two mounting holes spaces .5" to .625" apart that accept 1/4" screws.
  - Jumper will be made with UL Listed components
  - **Color:** N/A
  - **Quantity:** As required.
  - **Part Number:** Equal to **Cooper B-line**
  - SB6693/4x101/2, Equipment Ground Jumper Kit, 1 each.

- I. Firestop System
  1. See project drawings for detailed fire caulk systems and products.
  2. Intumescent fire caulk
    - The firestop system is comprised of the item or items penetrating the fire rated structure, the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure.
    - Firestop systems comprise an effective block for fire, smoke, heat, vapor and pressurized water stream.
    - All penetrations through fire-rated building structures (walls and floors) shall be sealed with an appropriate firestop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper firestop equipment.
    - Firestop systems shall be UL Classified to ASTM E814 (UL 1479).
    - **Color:** N/A
    - **Quantity:** As required.
    - **Part Number:** Equal to **3M or STI**
  - CP25
  - SSS100
  3. Re-Enterable Fire Stop System
    - See project drawings for detailed fire thru systems and products.
    - The re-enterable fire stop system is comprised of the item or items penetrating the fire rated structure, the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure.
    - No additional fire stopping material shall be required to obtain proper fire stopping.
    - The system shall offer full fire resistance whether it is empty or 100% visually filled.
    - The system shall be self-contained, and shall automatically adjust to differing cable loads.
    - The system shall allow add, moves, and changes without additional materials.
    - All penetrations through fire-rated building structures (walls and floors) shall be sealed with an appropriate re-enterable fire stop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper fire stop equipment.
    - Fire stop systems shall be UL Classified to ASTM E814 (UL 1479).
    - The system shall be gang-able using wall plates for additional capacity.
    - **Color:** N/A
    - **Quantity:** See Drawing for quantity and installation details.
    - **Part Number:** Equal to STI
  - EZDP33FWS
  - EZDP33WR

## Part 8 Execution

### 8.1 Installation

- A. Work Area Outlets Installation
  1. No more than 12" of cable shall be stored in an outlet box, modular furniture raceway, or insulated walls.

2. Bend radius of the cable in the termination area shall not be less than 4 times the outside diameter of the cable.
3. The cable jacket shall be maintained to within 12.7mm (½ inch) of the termination point.
4. All UTP cables shall have no more than 12.7mm (½ inch) of pair untwisted at the termination point.
5. Data jacks, unless otherwise noted in drawings, shall be located in the top position(s) of each faceplate. Data jacks in horizontally oriented faceplates shall occupy the left-most position(s).
6. Voice jacks, unless otherwise noted in drawings, shall occupy the next position(s) below the data on the faceplate. Voice jacks in horizontally oriented faceplates shall occupy the position left of the data jack.
7. Video jacks, unless otherwise noted in drawings, shall occupy the bottom position(s) on the faceplate. Video jacks in horizontally oriented faceplates shall occupy the position left of the data/voice jack.
8. All faceplates installed shall be level.
9. All outlets will be labeled according to the approved labeling scheme.
10. Each faceplate shall be machine labeled. The labeling shall be placed on the faceplate so that the individual jack can be clearly identified by its associated label.
11. Cables shall be identified by a self-adhesive label in accordance with the Identification and Labeling section of this specification and ANSI/TIA/EIA-606A. The cable label shall be applied to the cable no further than 6" behind termination module, behind the faceplate on a section of cable that can be accessed by removing the cover plate.

**B. Horizontal Distribution Cable Installation**

1. Cable shall be installed in accordance with manufacturer's recommendations and best industry practices.
2. Tie Wraps will not be allowed for supporting, bundling and/or dressing of any station cables on this project.
3. Contractor will provide a three foot "service loop" for all station cables. The service loop will be coiled and secured using Velcro in the accessible ceiling at the conduit stub to the work area outlet box.
4. A pull cord (nylon; 1/8" minimum) shall be co-installed with all cable installed in all "common" conduit runs. "Common" Conduit Runs are those that house more than one cable or set of cables that do not specifically feed a Work Station Outlet. Examples of "Common" Conduit Runs are: floor/ceiling penetrations, stub-throughs, distribution conduits, all conduits between J-boxes, etc.
5. Cable raceways shall not be filled greater than the ANSI/TIA -569 maximum fill for the particular raceway type or 40%.
6. Cables shall be installed in continuous lengths from origin to destination (no splices) except for transition points, or consolidation points.
7. The cable's minimum bend radius and maximum pulling tension shall not be exceeded.
8. Pulling tension on 4-pair UTP cables shall not exceed 25-lb for a four-pair UTP cable.
9. The Cable Support System shall be installed in such a way that will allow for future cables to be added and to provide sufficient protection of all cable.
10. For all installs where station cables are not installed in a continuous conduit run the following guidelines will apply. The Contractor will be responsible to reinstall all cables and pathways that do not meet with the following at no additional cost to the Owner:
  - J-hooks shall be installed to support all station cables every 4ft to 5ft.
  - All pathways shall be run at right angles. No diagonal pathways will be allowed unless otherwise noted on the drawings.
  - Horizontal cables shall be bundled in groups of no more than 25 cables per Caddy's CAT21 J-hook, no more than 40 cables per Caddy's CAT32 J-hook, and no more than 6A4 cables per Caddy's CAT6A4 J-hook.
  - At no point shall cable(s) rest on acoustic ceiling grids, acoustic panels, or lighting fixtures.

- All cables will be installed so that there is a minimum of 3” of clearance above all ceiling grid and tiles.
  - All cables will be installed so that there is a minimum of 12” of clearance above all florescent lighting.
  - All cables will be installed so that there is a minimum of 6A” of clearance from all fire alarm and electrical system conduits.
  - Cables shall not be attached to the ceiling grid or lighting fixture wires. The contractor will provide their own carriers wires to support their horizontal cabling.
  - All cables shall be installed above fire-sprinkler systems and plumbing system fixtures and devises. Cables shall not be attached to or supported by these fixtures and/or their ancillary equipment or hardware.
  - The cable system and support hardware shall be installed so that it does not obscure any valves, fire alarm conduit, boxes, or other control devices.
  - Contractor is responsible for sealing around all cables that penetrate fire rated barriers.
11. Any cable damaged or exceeding recommended installation parameters during installation shall be replaced by the contractor prior to final acceptance at no cost to the Owner.

C. Horizontal Cross-Connect Installation

1. Cables shall be dressed and terminated in accordance with the recommendations made in the ANSI/TIA-568-A standard, manufacturer's recommendations and best industry practices.
2. The cable jacket shall be maintained to within 12.7mm (½ inch) of the termination point.
3. All UTP cables shall have no more than 12.7mm (½ inch) of pair untwist at the termination point.
4. Bend radius of the cable in the termination area shall not exceed 4 times the outside diameter of the cable.
5. All cables shall be neatly bundled and dressed continuously from the entrance point of the Telecommunications Room to their respective panels or blocks. Each panel or block shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame. Contractor will use Velcro strip to bundle cables together. The use of Tie –Wraps is not permitted.
6. Each cable shall be clearly labeled on the cable jacket behind the patch panel at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.

D. Backbone Cable Installation

1. Backbone cables shall be installed separately from horizontal distribution cables.
2. Where possible the backbone and horizontal cables shall be installed in separate conduits.
3. Where possible backbone cables of the same type shall be combined in conduit runs to maximize conduit fill ratios.
4. Where backbone cables and distribution cables are installed in a cable tray or wireway, backbone cables shall be installed first and bundled separately from the horizontal distribution cables.
5. Pulling tension on Backbone cables shall not exceed the manufacture's limitations.
6. The minimum bend radius for all Backbone cables is 16 times the cable diameter or the manufactures specification, whichever is greater.
7. All OSP cables may not penetrate more than 50ft into the buildings before be terminated or splices to cable with a fire resistant jacket, unless the jacket is indoor/outdoor rated.
8. A pull cord (nylon; 1/8" minimum) shall be co-installed with all cable installed in any conduit.
9. All backbone cables shall be securely fastened to the sidewall of the TR on each floor.

10. Backbone cables spanning more than three floors shall be securely attached at the top of the cable run with a wire mesh grip and on alternating floors or as required by local codes.
11. Vertical runs of cable shall be supported to messenger strand, cable ladder, or other method to provide proper support for the weight of the cable.
12. Large bundles of cables and/or heavy cables shall be attached using metal clamps and/or metal banding to support the cables.

E. Backbone Cross Connect Installation

1. Cables shall be dressed and terminated in accordance with the recommendations made in the ANSI/TIA-568-A document, manufacturer's recommendations and best industry practices.
2. Bend radius of the cable in the termination area shall not exceed 16A times the outside diameter of the cable.
3. All cables shall be neatly bundled and dressed continuously from the entrance point of the Telecommunications Room to their respective panels or blocks.
4. Contractor will provide a minimum of a 3 foot "service loop" for each backbone cable before terminating to allow future rearrangement. Cables will be coiled and secured above the ceiling where possible or to the Telco Backboard where entrance point is from the floor.
5. Wall mounted termination block fields shall be installed with the lowest edge of the mounting frame 18" from the finished floor.
6. Contractor shall provide a machine label 1ft. to 2ft. from the entrance point of the TR and 6in. to 12in. from the termination point on each backbone cable. Cable shall be easily identified and fully legible without removing the bundle support ties.

F. Cabinets, Racks, Enclosures and Ladder Rack Installation

1. Wall Mount Racks/Cabinets shall be securely attached to the Telco Backboard using minimum 5/16" hardware or as required by local codes.
2. Floor Mount Racks/Cabinets shall be securely attached to the concrete floor using minimum 3/8" drop-in anchor hardware or as required by local codes.
3. All Floor Mount Racks/Cabinets will be either; secured on one side to the wall or attached to the closest wall with ladder rack.
4. All Racks/Cabinets shall be braced to meet Zone 4 seismic requirements.
5. Contractor will maintain a minimum of 36 inches of clearance from the front of the all rack/cabinets and all other obstructions.
6. Floor Mount Racks/Cabinets shall be installed to allow for a minimum of 36A" from rear and all other obstructions.
7. All racks shall be grounded to the telecommunications ground bus bar.
8. Rack mount screws not used for installing patch panels and other hardware shall be bagged and left with the rack upon completion of the installation.
9. The plywood bottom edge shall be mounted vertically no less than 12" above the finished floor.
10. Contractor will provide all cutouts for the Electrical Contractors expansion rings and electric receptacles as shown on the drawings.
11. Ladder Rack must be securely attached to walls, backboards, and racks/cabinets to comply with all Zone 4 seismic requirements.
12. Ladder rack shall be installed so that there is a minimum of 8" of unobstructed clearance above rack.
13. Ladder Rack shall be installed so that there is a minimum of 12" of clearance from all: florescent lighting, electrical conduits/circuits, and fire alarm conduits/devices.

G. Grounding and Bonding

1. The facility shall be equipped with a Telecommunications Bonding Backbone (TBB). This backbone shall be used to ground all telecommunications cable shields, equipment,

racks, cabinets, raceways, and other associated hardware that has the potential to act as a current carrying conductor.

2. The TBB shall be installed independent of the building's electrical and building ground and shall be designed in accordance with the recommendations contained in the ANSI/TIA/EIA-607 Telecommunications Bonding and Grounding Standard.
3. The main entrance facility/equipment room in each building shall be equipped with a telecommunications main grounding bus bar (TMGB).
4. The TMGB shall be connected to the building electrical entrance grounding facility. The intent of this system is to provide a grounding system that is equal in potential to the building electrical ground system. Therefore, ground loop current potential is minimized between telecommunications equipment and the electrical system to which it is attached.
5. All racks, metallic backboards, cable sheaths, metallic strength members, splice cases, cable trays, etc. shall be grounded to the respective TGB or TMGB using a minimum #6 AWG stranded copper bonding conductor and compression connectors.
6. All wires used for telecommunications grounding purposes shall be identified with a green insulation. Non-insulated wires shall be identified at each termination point with a wrap of green tape.
7. All cables and bus bars shall be identified and labeled in accordance with the System Documentation Section of this specification.
8. Wall-Mount Busbars
  - Attach busbars to the wall with appropriate hardware according to the manufacturer's installation instructions.
  - Conductor connections to the TMGB or TGB shall be made with two-hole bolt-on compression lugs sized to fit the busbar and the conductors.
  - Each lug shall be attached with stainless steel hardware after preparing the bond according to manufacturer recommendations and treating the bonding surface on the busbar with antioxidant to help prevent corrosion at the bond.
  - The wall-mount busbar shall be bonded to ground as part of the overall Telecommunications Bonding and Grounding System.
9. Rack-Mount Busbars and Ground Bars
  - When a rack or cabinet supports active equipment or any type of shielded cable or cable termination device requiring a ground connection, add a rack-mount horizontal or vertical busbar or ground bar to the rack or cabinet. The rack-mount busbar or ground bar provides multiple bonding points on the rack for rack and rack-mount equipment.
  - Attach rack-mount busbars and ground bars to racks or cabinets according to the manufacturer's installation instructions.
  - Bond the rack-mount busbar or ground bar to the room's TMGB or TGB with appropriately sized hardware and conductor.
10. Ground Terminal Block
  - Every rack and cabinet shall be bonded to the TMGB or TGB.
  - Minimum bonding connection to racks and cabinets shall be made with a rack-mount two-hole ground terminal block sized to fit the conductor and rack and installed according to manufacturer recommendations.
  - Remove paint between rack/cabinet and terminal block, clean surface and use antioxidant between the rack and the terminal block to help prevent corrosion at the bond.
11. Pedestal Clamp
  - At minimum, bond every sixth raised access floor pedestal with a minimum #6 AWG conductor to the TMGB or TGB using a pedestal clamp sized to fit the pedestal and the conductor and installed according to the manufacturer's recommendations.
  - If pedestal clamps are used to construct a signal reference grid, bond the signal reference grid to the TMGB or TGB and bond each rack and/or cabinet to the

signal reference grid using a compression tap or similar non-reversible bonding component sized to fit both conductors.

- Remove paint between the pedestal and pedestal clamp, clean surface and use antioxidant between the pedestal and the clamp to help prevent corrosion at the bond.
- Remove insulation from conductors where wires attach to the pedestal clamp.

12. Pipe Clamp

- Bond metal pipes located inside the data center computer room with a minimum #6 AWG conductor to the TMGB or TGB using a pipe clamp sized to fit the pipe and the conductor and installed according to the manufacturer's recommendations.
- Remove paint between the pipe and pipe clamp, clean surface and use antioxidant between the pipe and the clamp to help prevent corrosion at the bond.
- Remove insulation from conductors where wires attach to the pipe clamp.

13. Equipment Ground Jumper Kit

- Bond equipment to a vertical rack-mount busbar or ground bar using ground jumper according to the manufacturer's recommendations.
- Clean the surface and use antioxidant between the compression lugs on the jumper and the rack-mount busbar or ground bar to help prevent corrosion at the bond.

H. Firestop System

1. The firestop system is comprised of the item or items penetrating the fire rated structure, the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure.
2. Firestop systems comprise an effective block for fire, smoke, heat, vapor and pressurized water stream.
3. All penetrations through fire-rated building structures (walls and floors) shall be sealed with an appropriate firestop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper firestop equipment.
4. Firestop systems shall be UL Classified to ASTM E814 (UL 1479).

**8.2 Identification and Labeling**

A. General

1. The contractor shall develop and submit for approval a labeling system for the cable installation. The Owner will negotiate an appropriate labeling scheme with the successful contractor.
2. The approved system will comply with the ANSI/TIA-606-A Class 2 designations and include at a minimum, identifiers for all major components of the system: telecommunication rooms, grounding bus bars, racks, cables, panels and outlets. The labeling system shall designate the cables origin and destination and a unique identifier for the cable within the system. Racks and patch panels shall be labeled to identify the location within the cable system infrastructure.
3. All label printing will be machine generated or hand-held printers using indelible ink ribbons or cartridges. Self-laminating labels will be used on cable jackets, appropriately sized to the OD of the cable, and placed within view at the termination point on each end. Outlet, patch panel and wiring block labels shall be installed on, or in, the space provided on the device.
4. All labeling information shall be recorded on the as-built drawings and all test documents shall reflect the appropriate labeling scheme.

**8.3 Testing and Acceptance**

A. General

1. All cables and termination hardware shall be 100% tested for defects in installation and to verify cabling system performance under installed conditions according to the requirements of ANSI/TIA/EIA-568-A Addendum 5, TSB-67 and TSB-95. All pairs of each installed cable shall be verified prior to system acceptance. Any defect in the cabling system installation including but not limited to cable, connectors, feed through couplers, patch panels, and connector blocks shall be repaired or replaced in order to ensure 100% useable conductors in all cables installed.
2. All cables shall be tested in accordance with this document, the ANSI/TIA/EIA standards, the Manufacturer's Warranty guidelines and best industry practice. If any of these are in conflict, the Contractor shall bring any discrepancies to the attention of the project team for clarification and resolution.
3. Contractor will notify the Owner/Owner's Representative 72 hours before commencement of testing.
4. Upon receipt of the test documentation, the Customer reserves the right to have the contractor perform a 10% witnessed "spot testing" of the cabling system to validate test results provided in the test document, at no additional cost. If a significant amount of cables are marginal and/or fail during the "spot test" Contractor will retest the entire cable plant at no additional cost.

B. Copper Cable Testing

1. Twisted Pair Cable
  - All twisted-pair copper cable links (including backbone cables) shall be tested for continuity, pair reversals, shorts, opens and performance as indicated below.
  - Continuity - Each pair of each installed cable shall be tested using a test unit that shows opens, shorts, polarity and pair-reversals, crossed pairs and split pairs. Shielded/screened cables shall be tested with a device that verifies shield continuity in addition to the above stated tests. The test shall be recorded as pass/fail as indicated by the test unit in accordance with the manufacturers' recommended procedures, and referenced to the appropriate cable identification number and circuit or pair number. Any faults in the wiring shall be corrected and the cable re-tested prior to final acceptance.
  - Length - Each installed cable link shall be tested for installed length using a TDR type device. The cables shall be tested from patch panel to patch panel, block to block, patch panel to outlet or block to outlet as appropriate. The cable length shall conform to the maximum distances set forth in the ANSI/TIA/EIA-568-A Standard. Cable lengths shall be recorded, referencing the cable identification number and circuit or pair number. For multi-pair cables, the shortest pair length shall be recorded as the length for the cable.
2. Category 6 Performance
  - Follow the standards requirements established in:
    - ANSI/TIA/EIA-568-A -TSB-67
    - Wire Map
    - Length
      - Attenuation
      - NEXT (Near end crosstalk)
      - ANSI/TIA/EIA-568-A -TSB-95
    - Return Loss
      - ELFEXT Loss
      - Propagation Delay
      - Delay skew
      - ANSI/TIA/EIA-568-A, Amendment 5.
    - PSNEXT (Power sum near-end crosstalk loss)
      - PSELFEXT (Power sum equal level far-end crosstalk loss)



- A Level V or better test unit is required to verify category 6 performances and must be updated to include the requirements of TSB-95 and Amendment 5. Testers will be equal to Fluke Network’s DXT CableAnalyzer Series.
- All testers shall have been recalibrated with 6 months of use on this project. Contractor will be asked to provide proof of recalibration.
- Test results shall be automatically evaluated by the equipment, using the most up-to-date criteria from the ANSI/TIA Standard, and the result shown as pass/fail. The approved Level Three tester shall provide a printed document for each test that is also available in a downloadable file using an application from the test equipment manufacturer. The printed test results shall include a print out of all tests performed, and the individual test results for each cable.

3. Category 6A Performance

- Follow the standards requirements established in:

- ANSI/TIA/EIA-568-A -TSB-67
- Wire Map
- Length
  - Attenuation
  - NEXT (Near end crosstalk)
  - ANSI/TIA/EIA-568-A -TSB-95
- Return Loss
  - ELFEXT Loss
  - Propagation Delay
  - Delay skew
  - ANSI/TIA/EIA-568-A, Amendment 5.

- PSNEXT (Power sum near-end crosstalk loss)

- PSELFEXT (Power sum equal level far-end crosstalk loss)

- A Level V or better test unit is required to verify category 6A performances and must be updated to include the requirements of TSB-95 and Amendment 5. Testers will be equal to Fluke Network’s DTX CableAnalyzer Series.
- All testers shall have been recalibrated with 6 months of use on this project. Contractor will be asked to provide proof of recalibration.
- Test results shall be automatically evaluated by the equipment, using the most up-to-date criteria from the TIA/EIA Standard, and the result shown as pass/fail. The approved Level Three tester shall provide a printed document for each test that is also available in a downloadable file using an application from the test equipment manufacturer. The printed test results shall include a print out of all tests performed, and the individual test results for each cable.

C. Fiber Optic Testing

1. Backbone Fiber

- Each fiber strand shall be tested for attenuation with an Optical Power Meter and light source and with an Optical Time Domain Reflectometer (OTDR) for actual length and splice/connector loss. Cable length shall be verified using sheath markings. The guidelines and procedures established for Tier 1 testing in TIA/TSB-140 shall apply.
- All fiber optic cables shall be tested from the site’s MDF to each fiber terminals located in the IDF. The results of OTDR testing to define the length of each riser cable shall be documented. The Contractor shall conduct a power meter (loss) test of each fiber optic station and riser cable at both wavelengths, 850/1300nm for MM and 1310/1550nm for SM, A to B, B to A, and OSPL (OSPL is defined as  $L_a + L_b$ ). No individual station or riser fiber link segment (including connectors) shall measure more than 2.0 dB loss. Tests shall be conducted using ANSI/EIA/TIA/EIA-526-14A, Method B. Test results evaluation for the panel to panel (backbone) shall be based on the values set forth in ANSI/TIA/EIA-568-

B.1. The Contractor shall provide an electronic printout for each strand tested with the Power Meter and the OTDR.

- Where concatenated links are installed to complete a circuit between devices, the Contractor shall test each link from end to end to ensure the performance of the system. After the link performance test has been successfully completed, each link shall be concatenated and tested. The test method shall be the same used for the test described above. The evaluation criteria shall be established between the Owner and the Contractor prior to the start of the test.
- All installed cables must meet or exceed the defined standards for performance. The Contractor shall take all steps necessary to repair or replace any optic not meeting the standard.
- Fiber optic riser and station cable test results shall be provided in electronic format to the Owner.
- 

D. Grounding and Bonding Systems

1. General

- Installation: The Contractor shall provide grounding and bonding in accordance with the requirements of NFPA 70, IEEE 142, ANSI/TIA 568, ANSI/TIA 607, state and local codes, the campus standards and to requirements specified herein. Codes shall be complied with as a minimum requirement, with these specifications prevailing when they are more stringent.
- Bonding
  - Metallic conduits, wireways, metal enclosures of busways, cable boxes, equipment housings, cable racks and all non-current carrying metallic parts of the installed telecommunications services shall be grounded with #6 AWG copper wire. The metallic conduit system shall be used for equipment and enclosure grounding but not as a system ground conductor.
  - All metallic conduit stub-ups shall be grounded, and where multiple stub-ups are made within an equipment enclosure, they shall be equipped with grounding bushings and bonded together and to the enclosure and the enclosure ground bus.
  - Each metallic raceway, pipe, duct and other metal object entering the buildings shall be bonded together. The Contractor shall use #6 AWG bare copper conductors.
  - The Contractor shall bond telecommunications equipment and busbars separately.

2. Signal Reference Grounding and Bonding

- Each identified telecommunications space within a building shall have a common signal reference ground. The signal reference ground shall conform to the following:
  - Within the building, all communication spaces shall be separately bonded to each other and connected to the primary building ground in accordance with the provisions of ANSI/TIA 607. The communication ground shall not ground any other equipment or be connected to any potential high voltage source. All racks, frames, drain wires, and all installed communication equipment shall only be grounded to this common reference ground with a minimum size #6 AWG copper wire.
  - The Contractor shall provide, as a minimum, a continuous #3/0 AWG green electrical conductor connected to a 1/4" x 4" x 5.25" telecommunications grounding bus bar (TGB) 6" AFF on the plywood backboard of each IDF (or telecommunication space) to terminate chassis and other equipment grounds.
  - The ground wires from each individual IDF shall be routed directly to the Building Distribution Frame (BDF), terminated and bonded together via a

telecommunications main grounding bus bar (TMGB) of minimum 1/4" x 4" x 12" dimensions. This point of single reference for all closets in a building shall in turn be grounded with a minimum #3/0 AWG ground conductor to the main building ground. If a main building ground is unavailable, the ground wire from the BDF shall be grounded to the nearest electrical panel ground bus bar. The building ground for signal reference shall be the building service entrance ground.

- Riser/Tie Cable Bonding
  - There shall be no bonding between the entry cable and the inside riser or distribution cable.
  - All riser and tie cable shields shall be bonded into a single continuous path end-to-end and grounded on each floor in which pairs leave the sheath. Cable shields shall be grounded to the signal reference ground provided in each telecommunication space.
3. Grounding and Bonding Testing Inspection Procedures
- As an exception to requirements that may be stated elsewhere in these documents, the Inspector of Record shall be given five (5) working days' notice prior to each test. The Contractor shall provide all test equipment and personnel and shall provide written copies of all test results.
  - Grounding and bonding system conductors and connections shall be inspected for tightness and proper installation.
  - The Contractor shall provide personnel and test equipment for point-to-point resistance tests before connecting equipment. Perform point-to-point tests in each building to determine the resistance between the main grounding system and all BDF/IDF ground bus bars. Investigate and correct point-to-point resistance values that exceed 0.5 ohm. The Contractor shall record resistance measurements at all test point locations.

E. Information Outlets

1. General Requirements

- Station outlets shall be mounted securely at work area locations.
- Station outlets shall be located so that the cable required to reach the desktop equipment is no more than 10 feet long.
- Station outlets should not be "daisy-chained."
- Outlets shall be mounted as follows:
  - Wall phone: 48 inches above the finished floor.
  - Standard voice/data outlet: 15 inches above the finished floor.
  - Wall-mounted video outlet: 78 inches above the finished floor.
  - Counter top: 6 inches above the counter top.

2. Modular Furniture Telecommunications Outlets

- The Contractor shall provide and install all components and labor necessary to completely install, test, and document voice and data telecommunications outlets at each modular furniture workstation location.
- Category 6 station cable shall be placed from the BDF, through the riser sleeves, through the cable tray system into the conduit, ceiling or floor poles, etc. into the furniture to be served.
- The Contractor shall coordinate the telecommunications and electrical installation so that the modular furniture is served from the joint signal/power floor monuments or joint power pole in a consistent manner. The Contractor shall provide and install all fittings, flex conduit, adapter plates, and telecommunications cable and components necessary to install Category 6 station cable from the consolidation point box, through the ceiling or floor

monument or pole, into the furniture raceway, and to the final user outlet location (including jacks, adapters, and faceplates).

- The telecommunications installers shall coordinate with the electrical drawings for the number and location of user voice and data outlets.
- Labels shall be numbered according to a scheme developed in consultation with the owner's representative.

F. Grounding and Bonding

1. The facility shall be equipped with a Telecommunications Bonding Backbone (TBB). This backbone shall be used to ground all telecommunications cable shields, equipment, racks, cabinets, raceways, and other associated hardware that has the potential to act as a current carrying conductor.
2. The TBB shall be installed independent of the building's electrical and building ground and shall be designed in accordance with the recommendations contained in the ANSI/TIA/EIA-607 Telecommunications Bonding and Grounding Standard.
3. The main entrance facility/equipment room in each building shall be equipped with a telecommunications main grounding bus bar (TMGB).
4. The TMGB shall be connected to the building electrical entrance grounding facility. The intent of this system is to provide a grounding system that is equal in potential to the building electrical ground system. Therefore, ground loop current potential is minimized between telecommunications equipment and the electrical system to which it is attached.
5. All racks, metallic backboards, cable sheaths, metallic strength members, splice cases, cable trays, etc. shall be grounded to the respective TGB or TMGB using a minimum #6 AWG stranded copper bonding conductor and compression connectors.
6. All wires used for telecommunications grounding purposes shall be identified with a green insulation. Non-insulated wires shall be identified at each termination point with a wrap of green tape.
7. All cables and bus bars shall be identified and labeled in accordance with the System Documentation Section of this specification.
8. Wall-Mount Busbars
  - Attach busbars to the wall with appropriate hardware according to the manufacturer's installation instructions.
  - Conductor connections to the TMGB or TGB shall be made with two-hole bolt-on compression lugs sized to fit the busbar and the conductors.
  - Each lug shall be attached with stainless steel hardware after preparing the bond according to manufacturer recommendations and treating the bonding surface on the busbar with antioxidant to help prevent corrosion at the bond.
  - The wall-mount busbar shall be bonded to ground as part of the overall Telecommunications Bonding and Grounding System.
9. Rack Mount Busbars and Ground Bars
  - When a rack or cabinet supports active equipment or any type of shielded cable or cable termination device requiring a ground connection, add a rack-mount horizontal or vertical busbar or ground bar to the rack or cabinet. The rack-mount busbar or ground bar provides multiple bonding points on the rack for rack and rack-mount equipment.
  - Attach rack-mount busbars and ground bars to racks or cabinets according to the manufacturer's installation instructions.
  - Bond the rack-mount busbar or ground bar to the room's TMGB or TGB with appropriately sized hardware and conductor.
10. Ground Terminal Block
  - Every rack and cabinet shall be bonded to the TMGB or TGB.

- Minimum bonding connection to racks and cabinets shall be made with a rack-mount two-hole ground terminal block sized to fit the conductor and rack and installed according to manufacturer recommendations.
- Remove paint between rack/cabinet and terminal block, clean surface and use antioxidant between the rack and the terminal block to help prevent corrosion at the bond.

11. Pedestal Clamp

- At minimum, bond every sixth raised access floor pedestal with a minimum #6 AWG conductor to the TMGB or TGB using a pedestal clamp sized to fit the pedestal and the conductor and installed according to the manufacturer's recommendations.
- If pedestal clamps are used to construct a signal reference grid, bond the signal reference grid to the TMGB or TGB and bond each rack and/or cabinet to the signal reference grid using a compression tap or similar non-reversible bonding component sized to fit both conductors.
- Remove paint between the pedestal and pedestal clamp, clean surface and use antioxidant between the pedestal and the clamp to help prevent corrosion at the bond.
- Remove insulation from conductors where wires attach to the pedestal clamp.

12. Pipe Clamp

- Bond metal pipes located inside the data center computer room with a minimum #6 AWG conductor to the TMGB or TGB using a pipe clamp sized to fit the pipe and the conductor and installed according to the manufacturer's recommendations.
- Remove paint between the pipe and pipe clamp, clean surface and use antioxidant between the pipe and the clamp to help prevent corrosion at the bond.
- Remove insulation from conductors where wires attach to the pipe clamp.

13. Equipment Ground Jumper Kit

- Bond equipment to a vertical rack-mount busbar or ground bar using ground jumper according to the manufacturer's recommendations.
- Clean the surface and use antioxidant between the compression lugs on the jumper and the rack-mount busbar or ground bar to help prevent corrosion at the bond.

G. Fire Stop System

1. The fire stop system is comprised of the item or items penetrating the fire rated structure, the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure.
2. Fire stop systems comprise an effective block for fire, smoke, heat, vapor and pressurized water stream.
3. All penetrations through fire-rated building structures (walls and floors) shall be sealed with an appropriate fire stop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating item i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall use the proper fire stop equipment.
4. Fire stop systems shall be UL Classified to ASTM E814 (UL 1479).

**8.4 System Close Out and As-Built Documentation**

A. Documentation

1. Refer to Section 27 0000 '4.5 – Close Out Documentation, A-Structured Cabling' for requirements.

**END OF SECTION**

### CABLE SCHEDULE

DATA CABLE	- 4 PAIR TWISTED CABLE. SEE SPECIFICATIONS FOR PRODUCT DATA.
SMF OSP	- 9 MICRON SINGLE-MODE FIBER OPTIC CABLE, OUTSIDE PLANT RATED. SEE CABLE SCHEDULE FOR STRAND COUNT. SEE SPECIFICATIONS FOR PRODUCT DATA.
MMF OSP	- 50 MICRON MULTIMODE FIBER OPTIC CABLE, OUTSIDE PLANT RATED. SEE CABLE SCHEDULE FOR STRAND COUNT. SEE SPECIFICATIONS FOR PRODUCT DATA.
SMF I/O	- 9 MICRON SINGLE-MODE FIBER OPTIC CABLE, INDOOR / OUTDOOR RATED. SEE CABLE SCHEDULE FOR STRAND COUNT. SEE SPECIFICATIONS FOR PRODUCT DATA.
MMF I/O	- 50 MICRON MULTIMODE FIBER OPTIC CABLE, INDOOR / OUTDOOR RATED. SEE CABLE SCHEDULE FOR STRAND COUNT. SEE SPECIFICATIONS FOR PRODUCT DATA.
SMF RISER	- 9 MICRON SINGLE-MODE FIBER OPTIC CABLE, RISER RATED. SEE CABLE SCHEDULE FOR STRAND COUNT. SEE SPECIFICATIONS FOR PRODUCT DATA.
MMF RISER	- 50 MICRON MULTI-MODE FIBER OPTIC CABLE, RISER RATED. SEE CABLE SCHEDULE FOR STRAND COUNT. SEE SPECIFICATIONS FOR PRODUCT DATA.
XX-PR CU OSP	- 25 PAIR CAT3 TWISTED PAIR. SEE SPECIFICATIONS FOR PRODUCT DATA.
INTERCOM	- UNSHIELDED/SHIELDED TWISTED PAIR. SEE SPECIFICATIONS FOR PRODUCT DATA.
SER	- 18/2 SHIELDED MICROPHONE CABLE
SER	- 12/2 SHIELDED SPEAKER CABLE

### ACRONYMS & DEFINITIONS

#	- AFTER SYMBOL IS EQUAL TO NUMBER OF CABLES
#"	- MOUNTING HEIGHT ABOVE FINISHED FLOOR
AFF	- ABOVE FINISHED FLOOR
B	- BLANK
B.O.B.	- BOTTOM OF BOX
C	- CONDUIT
CAT#	- DENOTES CATEGORY CABLE
D	- DEMOLISH
E	- EXISTING (LIGHT SYMBOLS)
EF	- ENTRANCE FACILITY (AKA MPOE)
F	- FUTURE, PROVIDE BLANK FACEPLATE FOR ALL FUTURE OUTLETS
FB#	- FLOOR BOX NUMBER
HC	- HORIZONTAL CROSS CONNECT (PREVIOUSLY KNOWN AS IDF)
IC	- INTERMEDIATE CROSS CONNECT
MC	- MAIN CROSS CONNECT (PREVIOUSLY KNOWN AS MDF)
MMF	- MULTI-MODE FIBER OPTIC CABLE
MPOE	- MAIN POINT OF ENTRY
N	- NEW (DARK SYMBOLS)
PB	- PULL BOX
PC	- PULL CAN
R	- REMOVE
RMU	- RACK MOUNT UNITS
SER	- SOUND EQUIPMENT RACK
SMF	- SINGLE MODE FIBER OPTIC CABLE
SMR	- SURFACE MOUNT RACEWAY
TC	- TERMINAL CABINET
TE	- TELECOMMUNICATIONS ENCLOSURE
TMGM	- TELECOMMUNICATIONS MAIN GROUNDING BUS BAR
T.O.B.	- TOP OF BOX
TR	- TELECOMMUNICATIONS ROOM
UON	- UNLESS OTHERWISE NOTED
UPS	- UNINTERRUPTED POWER SUPPLY
W	- WALL OUTLET MOUNTED @+48" AFF
WAP	- WIRELESS ACCESS POINT @+96" AFF UON.
WG	- WIRE GUARD
WP	- WEATHER PROOF

### CONDUIT LINE TYPES

	(N)CONDUIT ROUTE ABOVE GROUND, OR ABOVE COVERED WALKWAYS.
	(E)CONDUIT ROUTE UNDER GROUND, UNDER SLAB, OR UNDER FLOOR.

### DATA SYMBOL LIST

	DATA OUTLET - PROVIDE ONE (1)1G CUT-IN-RING, RUN CABLES LOOSE IN WALL TO ACCESSIBLE ATTIC SPACE. QUANTITY PER PLAN. DATA CABLES/JACKS AND FACE PLATE PER SPECS. @+18" T.O.B. UON.
	WALL PHONE OUTLET - PROVIDE ONE (1)1G CUT-IN-RING, RUN CABLE LOOSE IN WALL TO ACCESSIBLE ATTIC SPACE. ONE (1)VOICE CABLE/JACK AND FACEPLATE, PER SPECIFICATIONS. @+48" T.O.B., UON.
	DATA OUTLET FOR SUSPENDED CEILING WIRELESS ACCESS POINT - PROVIDE ONE (1)SS BACK BOX ABOVE CEILING TILE. TWO (2)DATA CABLES/JACKS, FACEPLATE, PER SPECIFICATIONS. SEE SPECIFICATIONS FOR MANUFACTURE DETAILS. CABLES AND JACKS PER SPECIFICATIONS. INSTALL PER DTL 1/T4.2.

### PATHWAY SYMBOL LIST

	CONDUIT SLEEVE - 4" CONDUIT SLEEVE UNLESS OTHERWISE NOTED. ALWAYS EXTEND SLEEVES PAST SOFFITS AND HARD LID CEILINGS.
--	--

### CABINET/RACK SYMBOL LIST

	(E) MDF LOCATION TO REMAIN.
	IDF LOCATION - 36" H x 30" D, PER SPECIFICATIONS. INSTALL PER DETAIL 2,3/T4.2.
	IDF LOCATION - 78.5" H x 38" D, PER SPECIFICATIONS. INSTALL PER DETAIL 1/T4.3.
	IDF LOCATION - CPI 90° 2 POST STAND UP RACK, PER SPECIFICATIONS. INSTALL PER DETAIL 3/T4.1.
	IDF LOCATION - 78.7" H x 47.3" D, PER SPECIFICATIONS. INSTALL PER DETAIL 1,5/T4.1.

### SECURITY SYMBOL LIST

	(E) CAMERAS. CONTRACTOR TO RELOCATE EXISTING CABLES FORM (E) IDF TO (N) IDF.
--	--

### RACEWAYS

- WHERE CONDUIT IS USED, 1" MINIMUM CONDUIT SHALL BE PROVIDED U.O.N.
- EMPTY CONDUIT FOR OUTLETS SHALL BE 1" THIN WALL INSTALLED CONCEALED IN WALLS, TERMINATED AND BUSHED 6" IN ACCESSIBLE HUNG CEILING AND DIRECTED TOWARDS CLOSET. ALL EMPTY CONDUIT SHALL BE FURNISHED WITH A PULL STRING.
- ALL CONDUITS INSTALLED OUTDOORS SHALL BE RIGID GALVANIZED WITH THREADED CONNECTIONS. ALL CONDUITS INSTALLED UNDERGROUND OR IN CONCRETE SLABS SHALL BE RIGID PVC WITH A SEPARATE GROUNDING CONDUCTOR AND CONCRETE ENCASEMENT WHERE REQUIRED.
- FLEXIBLE CONDUIT SHALL BE USED TO MAKE FINAL CONNECTIONS, AND WHERE THE INSTALLATION OF RIGID CONDUIT IS IMPRACTICAL.
- WIRING SHALL BE INSTALLED CONCEALED IN WALLS, ABOVE CEILING OR BELOW FLOOR WHERE POSSIBLE. INSTALL CONDUIT PARALLEL TO BUILDING LINES. CLEAR ALL OPENINGS, PIPES, DUCTS, STRUCTURAL COMPONENTS, ETC.
- INSTALL CONDUIT CONTINUOUS BETWEEN BOXES AND CABINETS WITH NO MORE THAN THREE 90 DEGREE BENDS. SECURELY FASTEN IN PLACE WITH STRAPS, HANGERS, AND STEEL SUPPORTS AS REQUIRED.
- DO NOT SUPPORT CONDUIT FROM SUSPENDED CEILING GRID OR SUSPENSION WIRES. REAM AND THOROUGHLY CLEAN CONDUIT ENDS BEFORE INSTALLATION. OPENINGS SHALL BE PLUGGED OR COVERED TO KEEP CONDUIT CLEAN.

### GROUNDING

- ALL ELECTRICAL SYSTEMS SHALL BE GROUNDED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, THE LOCAL UTILITY COMPANY AND ALL OTHER LOCAL AUTHORITIES HAVING JURISDICTION. PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC CONDUITS, SUPPORTS, CABINETS, PLANE BOARDS AND SYSTEM GROUNDING NEUTRAL.
- GROUND CLAMPS SHALL BE LISTED SPECIFICALLY FOR GROUNDING. WHERE GROUNDING CONDUCTOR IS ENCLOSED IN CONDUIT, GROUND CLAMP SHALL GROUND BOTH CONDUCTOR AND CONDUIT.

### SCOPE OF WORK

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### SHEET INDEX

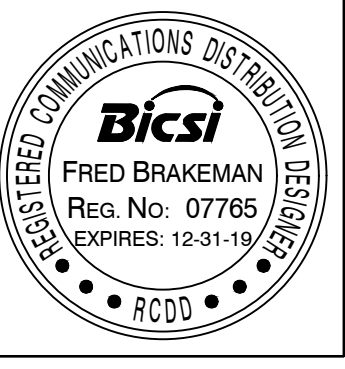
T0.0	TITLE SHEET (THIS PAGE)
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T1.0B	PARTIAL SITE PLAN
T0.1	BLUE OAK BUILDING - FLOOR PLAN
T0.2	GIANT FOREST BUILDING - FLOOR PLAN
T0.3	JOHN MUIR BUILDING - 1ST FLOOR PLAN
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T0.4	KAWEAH BUILDING - 1ST FLOOR PLAN
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T0.5	KERN BUILDING - FLOOR PLAN
T0.6	POTWISHA BUILDING - FLOOR PLAN
T0.7	SEQUOIA BUILDING - FLOOR PLAN
T0.8	SIERRA BUILDING - FLOOR PLAN
T0.9	SYCAMORE BUILDING - FLOOR PLAN
T0.10	TULE BUILDING - FLOOR PLAN
T0.11	UNIVERSITY BUILDING - FLOOR PLAN
T4.1	INSTALLATION DETAILS
T4.2	INSTALLATION DETAILS
T4.3	INSTALLATION DETAILS

### GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY LOW VOLTAGE AND TELECOM EQUIPMENT NECESSARY TO FULFILL APPLICABLE CODES, REGULATIONS, BUILDING STANDARDS AND THE BEST PRACTICES OF THE TRADE FOR INSTALLATION OF LOW VOLTAGE AND TELECOM WORK.
- ALL LOW VOLTAGE AND TELECOM WORK, MATERIALS AND EQUIPMENT SHALL CONFORM WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE, UNDERWRITERS LABORATORIES, BOARD OF UNDERWRITERS, OSHA, NEMA, NFPA AND ALL AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PAY FOR AND OBTAIN ALL REQUIRED PERMITS AND CERTIFICATES OF REQUIRED ORDINANCES, AND DELIVER THEM TO THE OWNER'S REPRESENTATIVE.
- UPON REVIEW OF THE DRAWINGS PRIOR TO SUBMITTING HIS PROPOSAL, THE LOW VOLTAGE AND TELECOM CONTRACTOR SHALL INFORM THE ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES WITHIN THE DRAWINGS AND REQUEST CLARIFICATION CONCERNING THE DISCREPANCIES. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS SHOULD SUCH PROCEDURE NOT BE FOLLOWED.
- THE CONTRACTOR SHALL COORDINATE THIS WORK WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION. THE CONTRACTOR SHALL ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT IN PROPER RELATION TO THE WORK AND EQUIPMENT OF OTHERS.

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STRUCTURED CABLING  
COLLEGE OF THE SEQUIOIAS  
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915 S. MOONEY DR.

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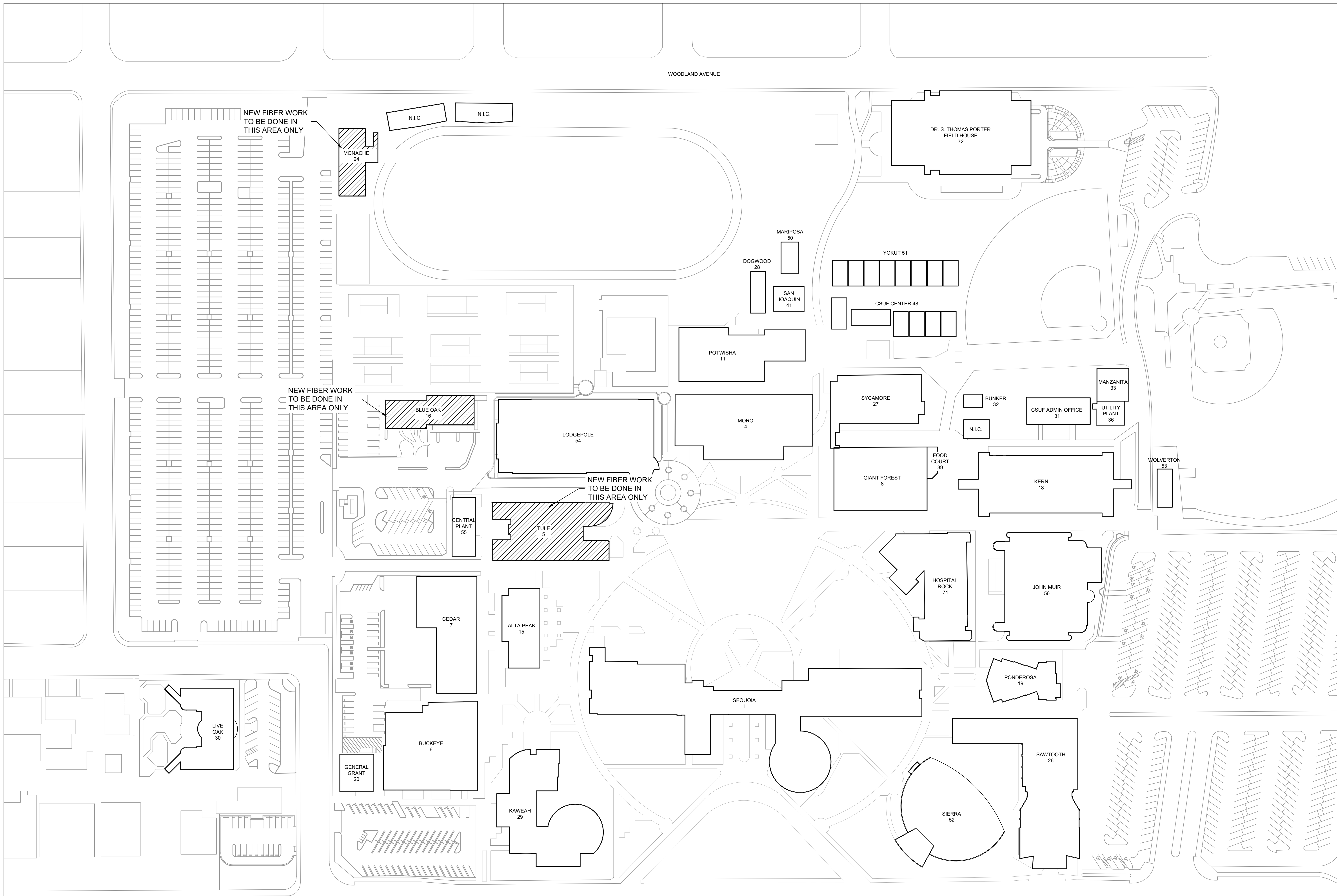


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SHEET

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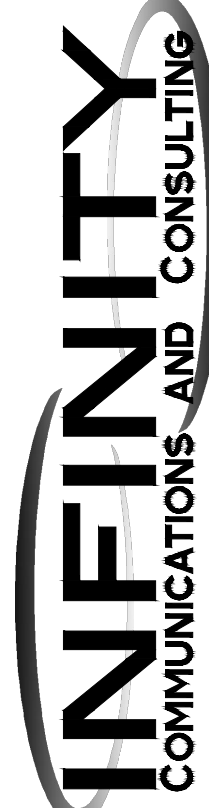
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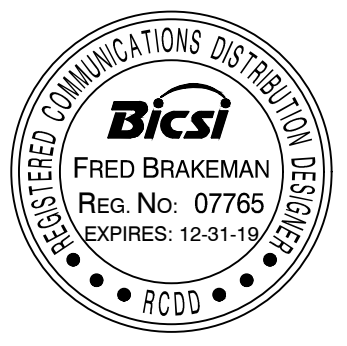


WOODLAND AVENUE

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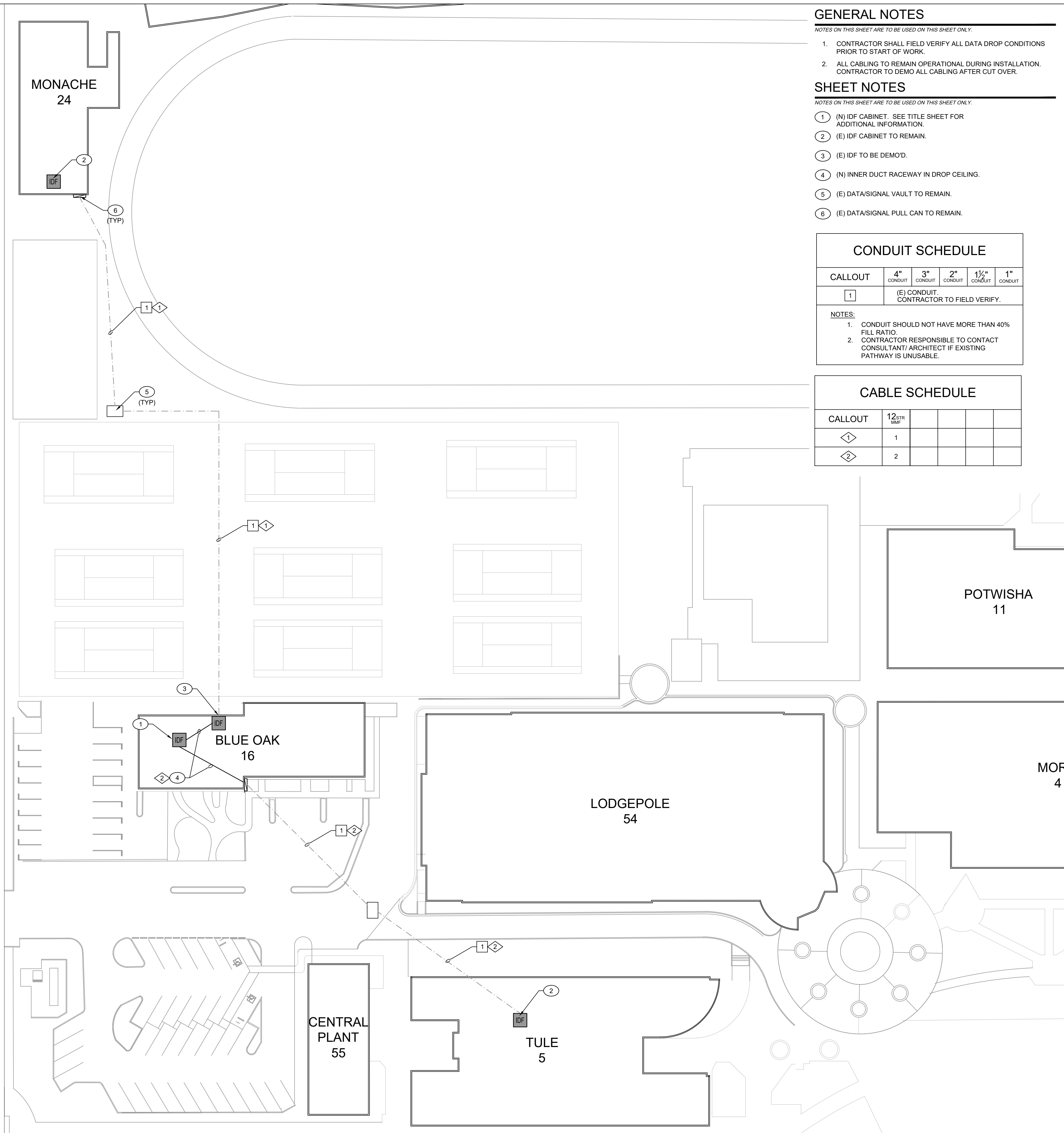
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COLLEGE OF THE SEQUOIAS  
OVERALL  
SITE PLAN

SHEET NUMBER  
**T1.0**

ISSUE DATE  
01/08/2019  
PROJECT 0023-18C.1

**1 COLLEGE OF THE SEQUOIAS - SITE PLAN**  
1/8" = 1'-0"





**GENERAL NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

1. CONTRACTOR SHALL FIELD VERIFY ALL DATA DROP CONDITIONS PRIOR TO START OF WORK.
2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① (N) IDF CABINET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) IDF CABINET TO REMAIN.
- ③ (E) IDF TO BE DEMO'D.
- ④ (N) INNER DUCT RACEWAY IN DROP CEILING.
- ⑤ (E) DATA/SIGNAL VAULT TO REMAIN.
- ⑥ (E) DATA/SIGNAL PULL CAN TO REMAIN.

**CONDUIT SCHEDULE**

CALLOUT	4" CONDUIT	3" CONDUIT	2" CONDUIT	1 1/2" CONDUIT	1" CONDUIT
①	(E) CONDUIT. CONTRACTOR TO FIELD VERIFY.				

**NOTES:**

1. CONDUIT SHOULD NOT HAVE MORE THAN 40% FILL RATIO.
2. CONTRACTOR RESPONSIBLE TO CONTACT CONSULTANT/ ARCHITECT IF EXISTING PATHWAY IS UNUSABLE.

**CABLE SCHEDULE**

CALLOUT	12 STR MMF				
①	1				
②	2				

**COLLEGE OF THE SEQUOIAS**  
STRUCTURED CABLING

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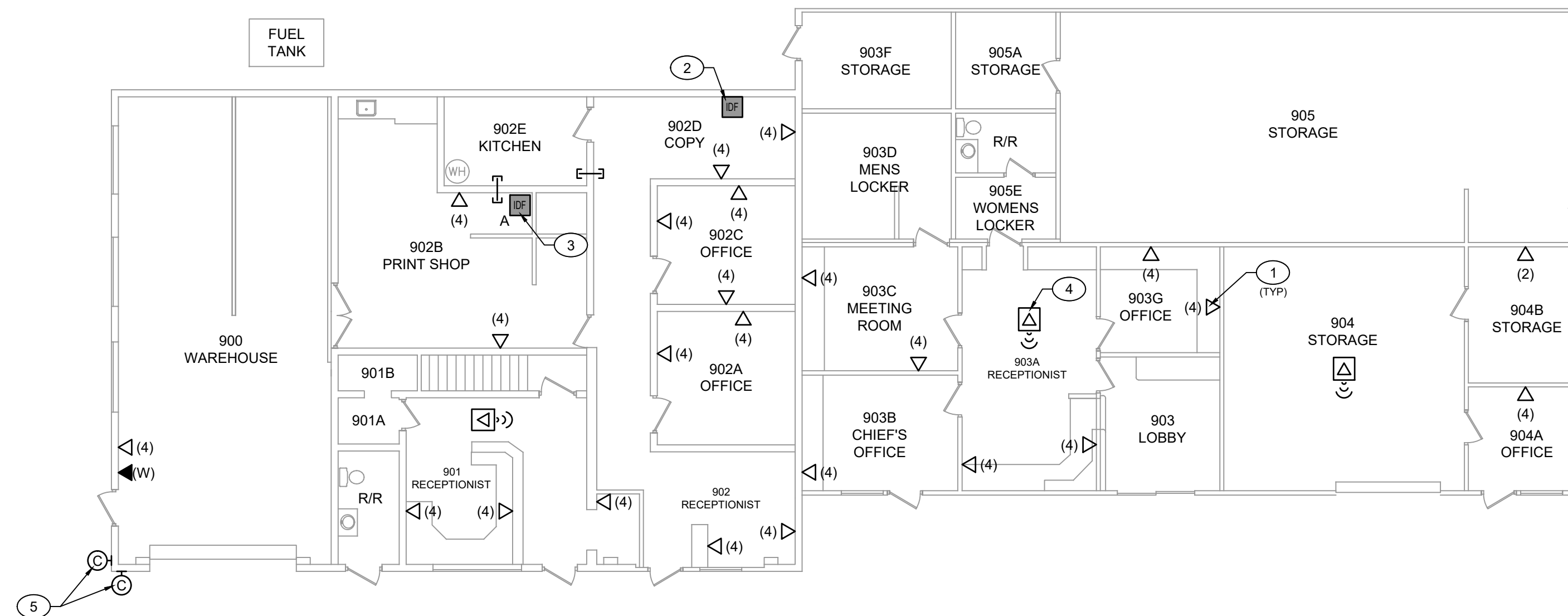
**SHEET DESCRIPTION**  
COLLEGE OF THE SEQUOIAS  
PARTIAL  
SITE PLAN

**SHEET NUMBER**  
**T1.0B**

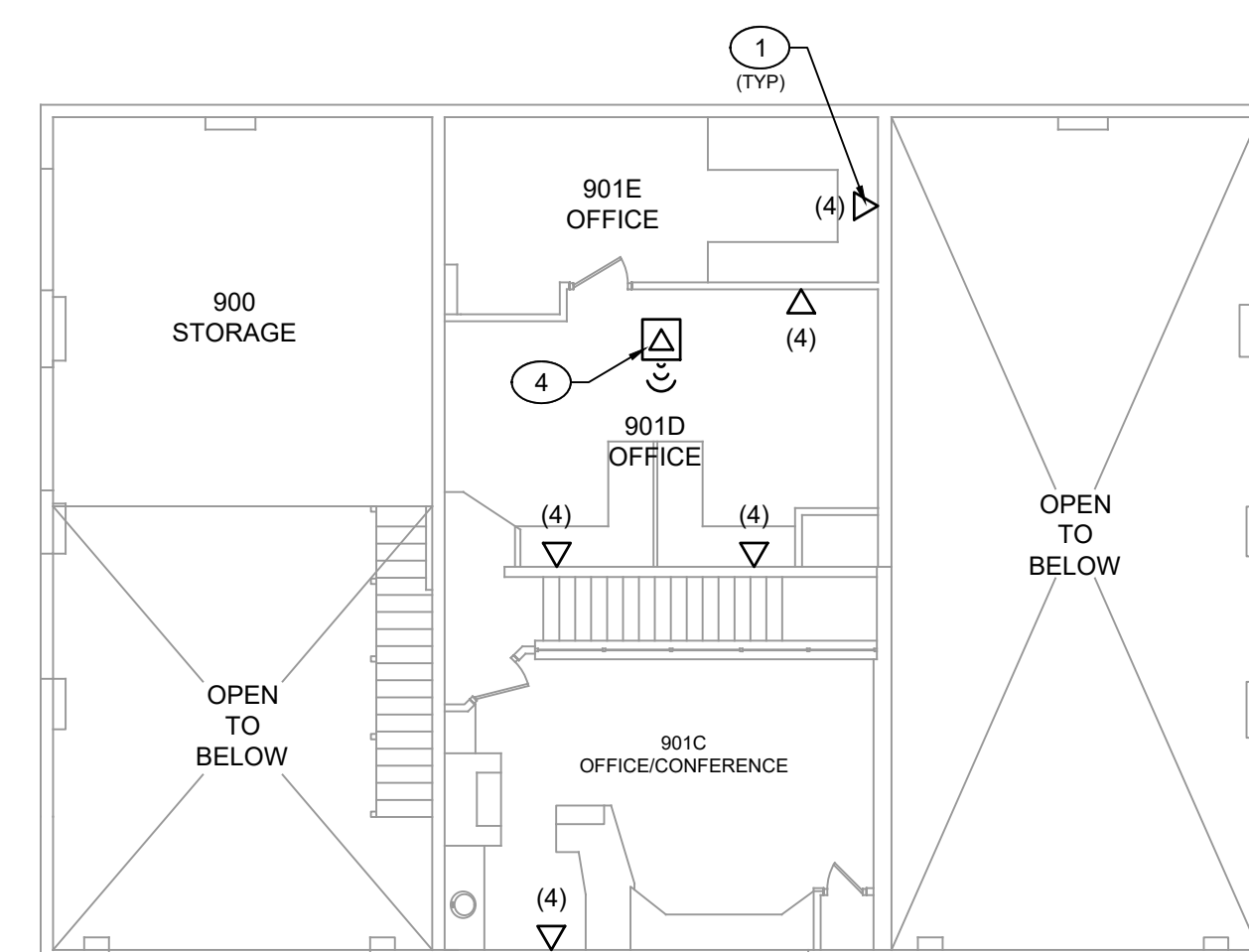
**ISSUE DATE**  
01/08/2019

**PROJECT** 0023-18C.1

① COLLEGE OF THE SEQUOIAS - PARTIAL SITE PLAN  
1:30



1 BLUE OAK BUILDING - 1ST FLOOR PLAN  
1" = 10'-0"



2 BLUE OAK BUILDING - 2ND FLOOR PLAN  
1" = 10'-0"

**GENERAL NOTES**

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2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- 1 DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- 2 (E) IDF TO BE DEMO'D.
- 3 (N) IDF CABINET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- 4 DATA OUTLET FOR SUSPENDED CEILING WIRELESS ACCESS POINT SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- 5 (E) CAMERAS. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.

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**SHEET DESCRIPTION**

BLUE  
OAK  
BUILDING  
FLOOR PLAN

**SHEET NUMBER**

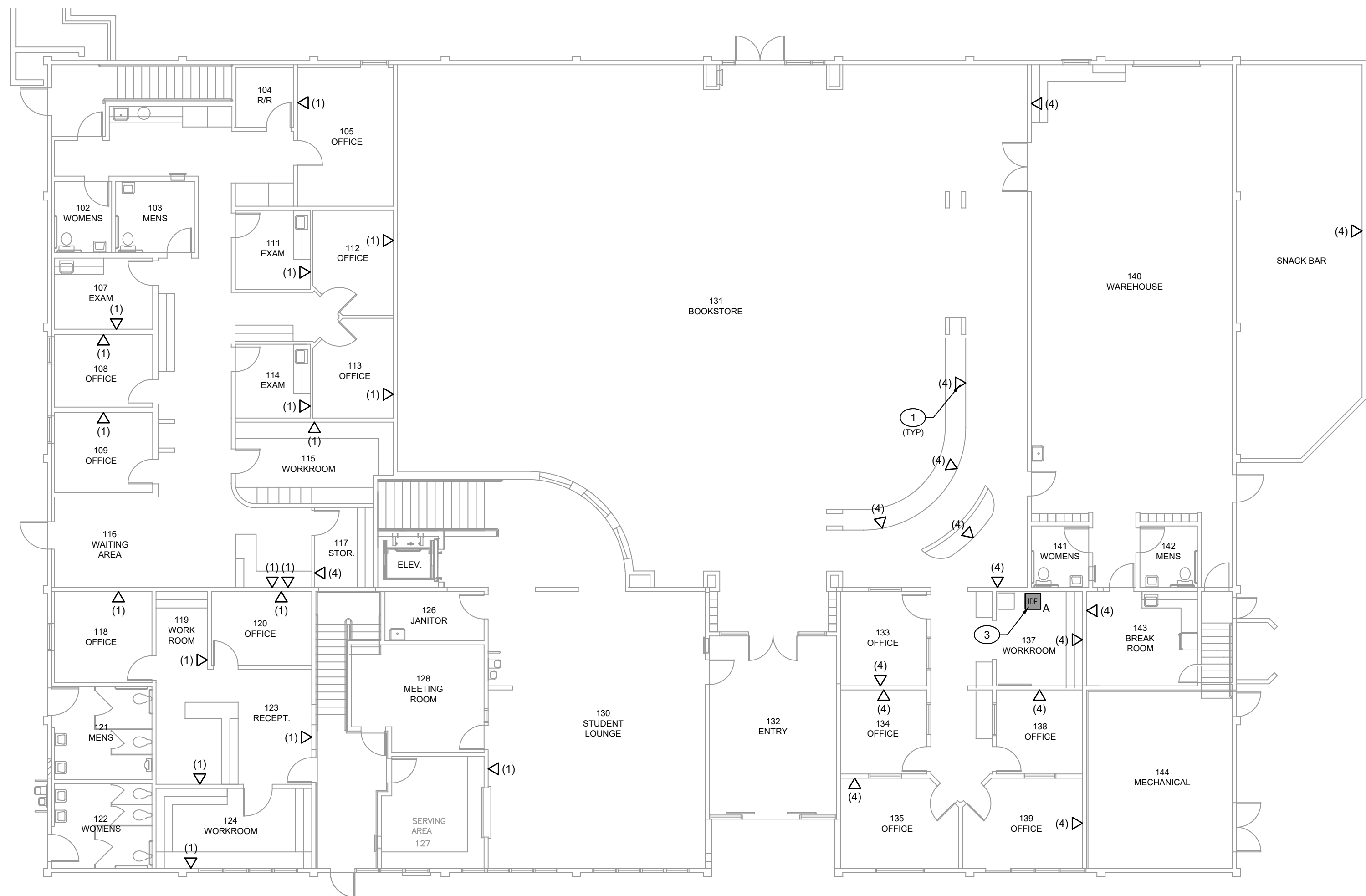
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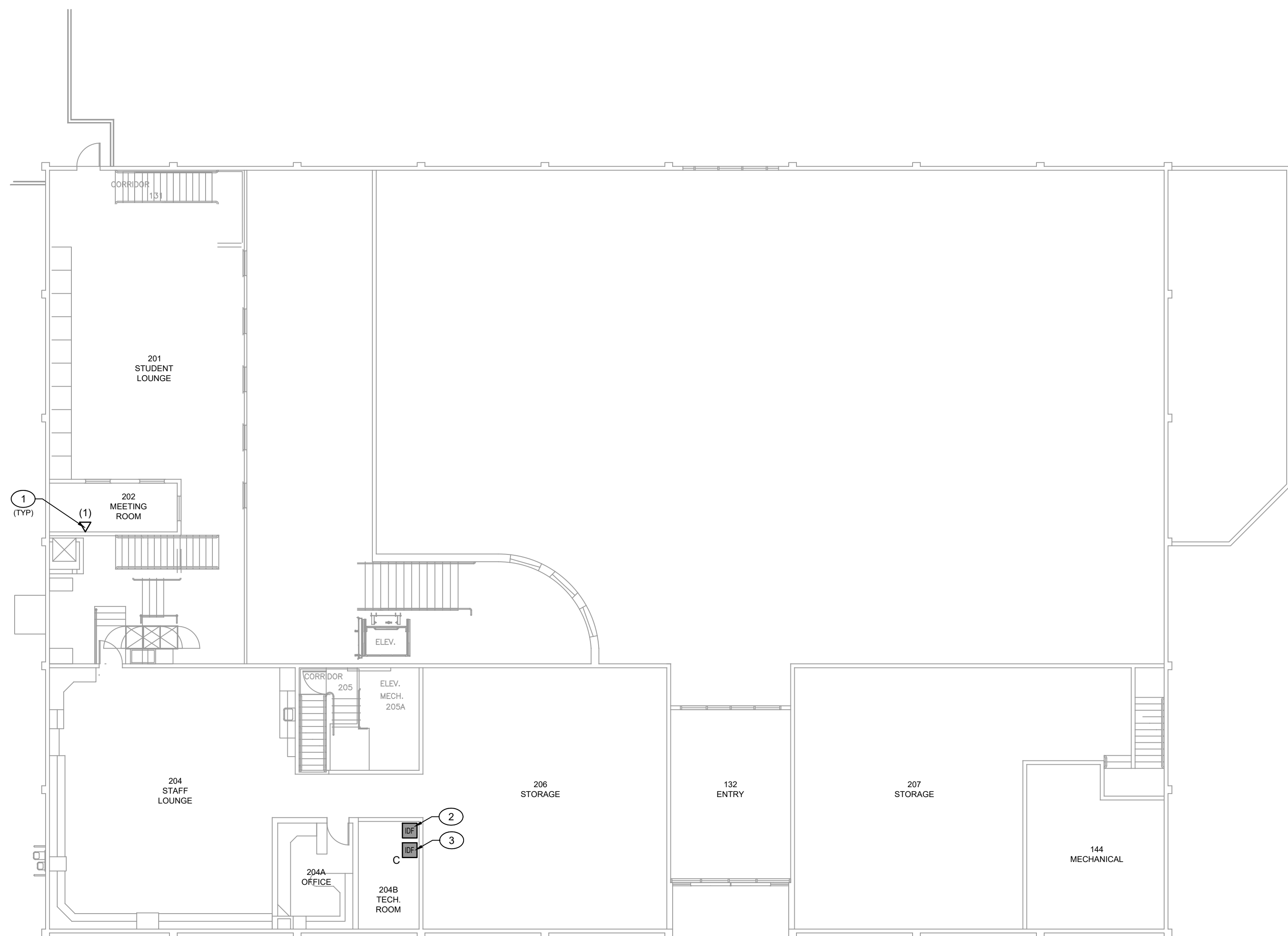
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**PROJECT**

0023-18C.1



**1** GIANT FOREST BUILDING - 1ST FLOOR PLAN  
3/32" = 1'-0"



**2** GIANT FOREST BUILDING - 2ND FLOOR PLAN  
3/32" = 1'-0"

**GENERAL NOTES**

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2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) IDF CABINET TO REMAIN.
- ③ (N) IDF CABINET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.

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STRUCTURED CABLING  
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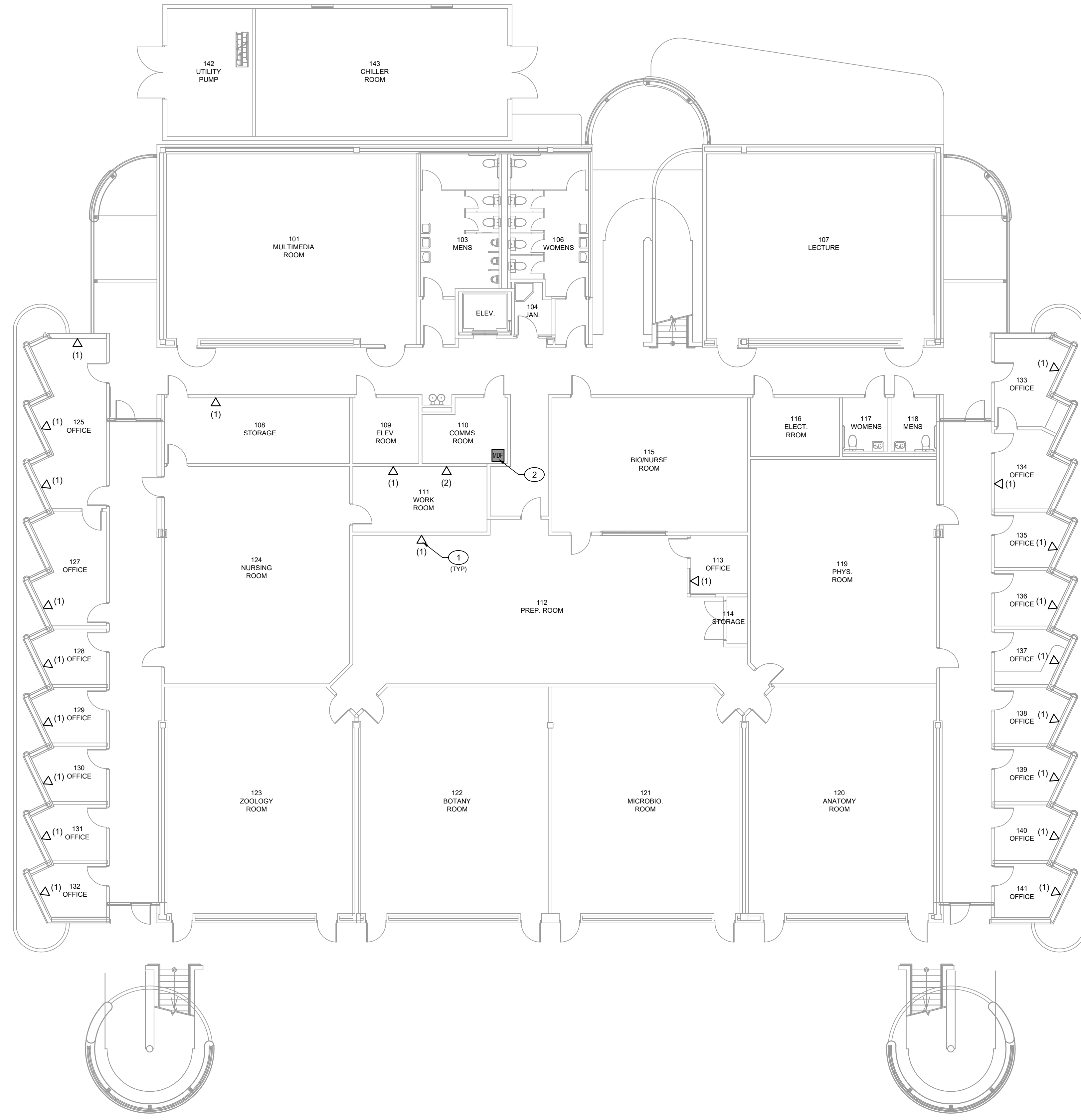
**SHEET DESCRIPTION**  
GIANT FOREST  
BUILDING  
1ST & 2ND  
FLOOR PLANS

**SHEET NUMBER**

**T0.2**

**ISSUE DATE**  
08/19/2019

**PROJECT** 0023-18C.1



**GENERAL NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

1. CONTRACTOR SHALL FIELD VERIFY ALL DATA DROP CONDITIONS PRIOR TO START OF WORK.
2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

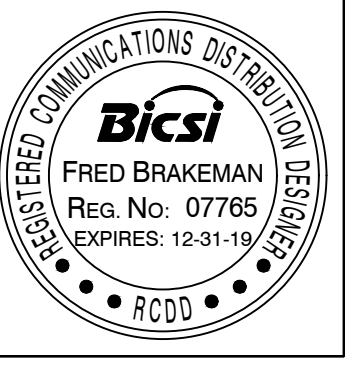
NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) MDF CABINET TO REMAIN.

① JOHN MUIR BUILDING - 1ST FLOOR PLAN  
1" = 10'-0"

**COLLEGE OF THE SEQUOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277

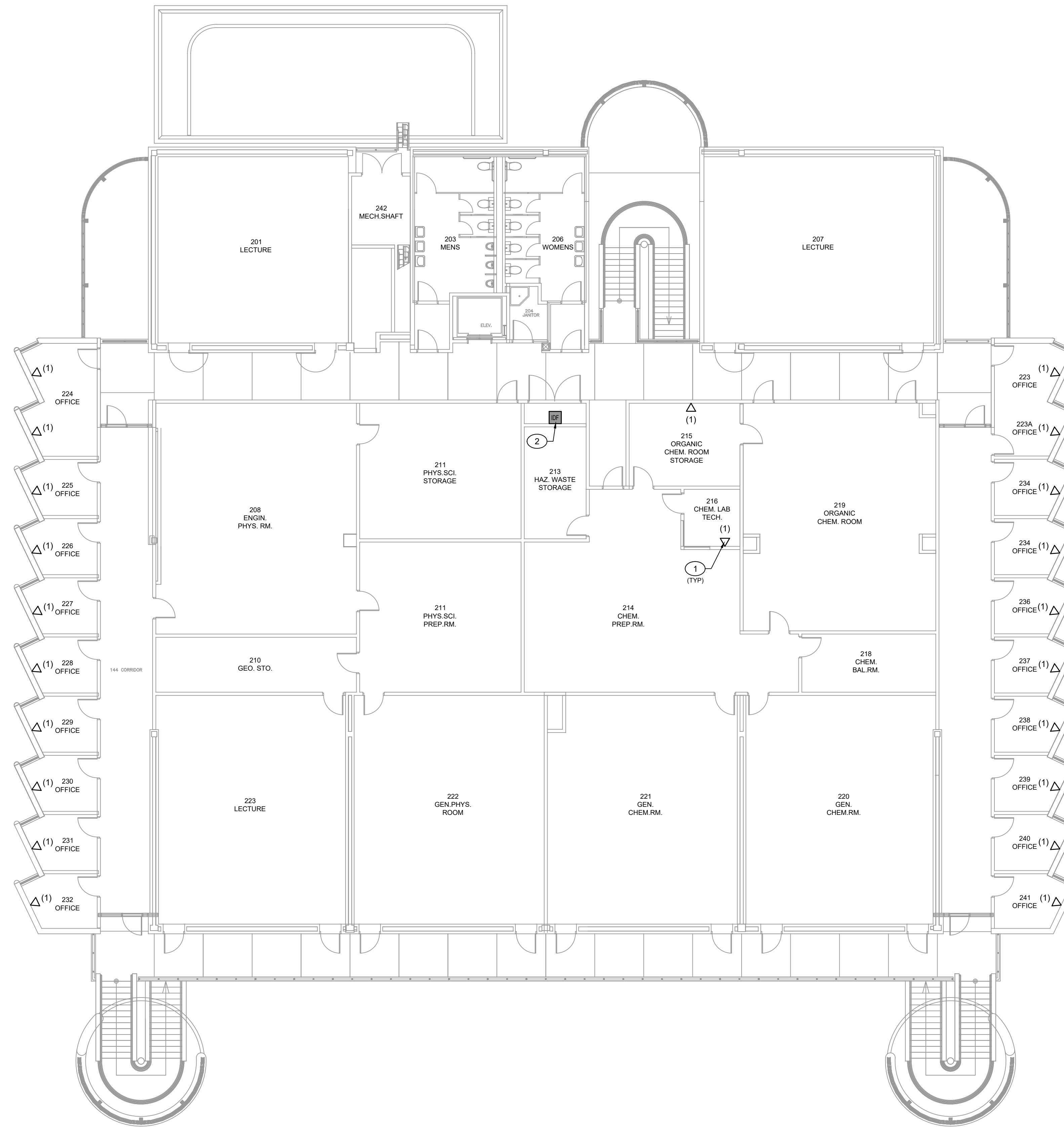
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SHEET DESCRIPTION  
JOHN MUIR  
BUILDING  
1ST FLOOR  
PLAN

SHEET NUMBER  
T0.3

ISSUE DATE  
08/19/2019  
PROJECT 0023-18C.1



**GENERAL NOTES**

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**SHEET NOTES**

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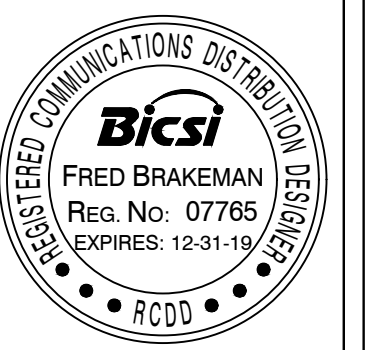
- (1) DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- (2) (E) IDF CABINET TO REMAIN.

**1 JOHN MUIR BUILDING - 2ND FLOOR PLAN**  
1" = 10'-0"

**COLLEGE OF THE SEQUOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277

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**SHEET DESCRIPTION**

JOHN MUIR  
BUILDING  
2ND FLOOR  
PLAN

**SHEET NUMBER**

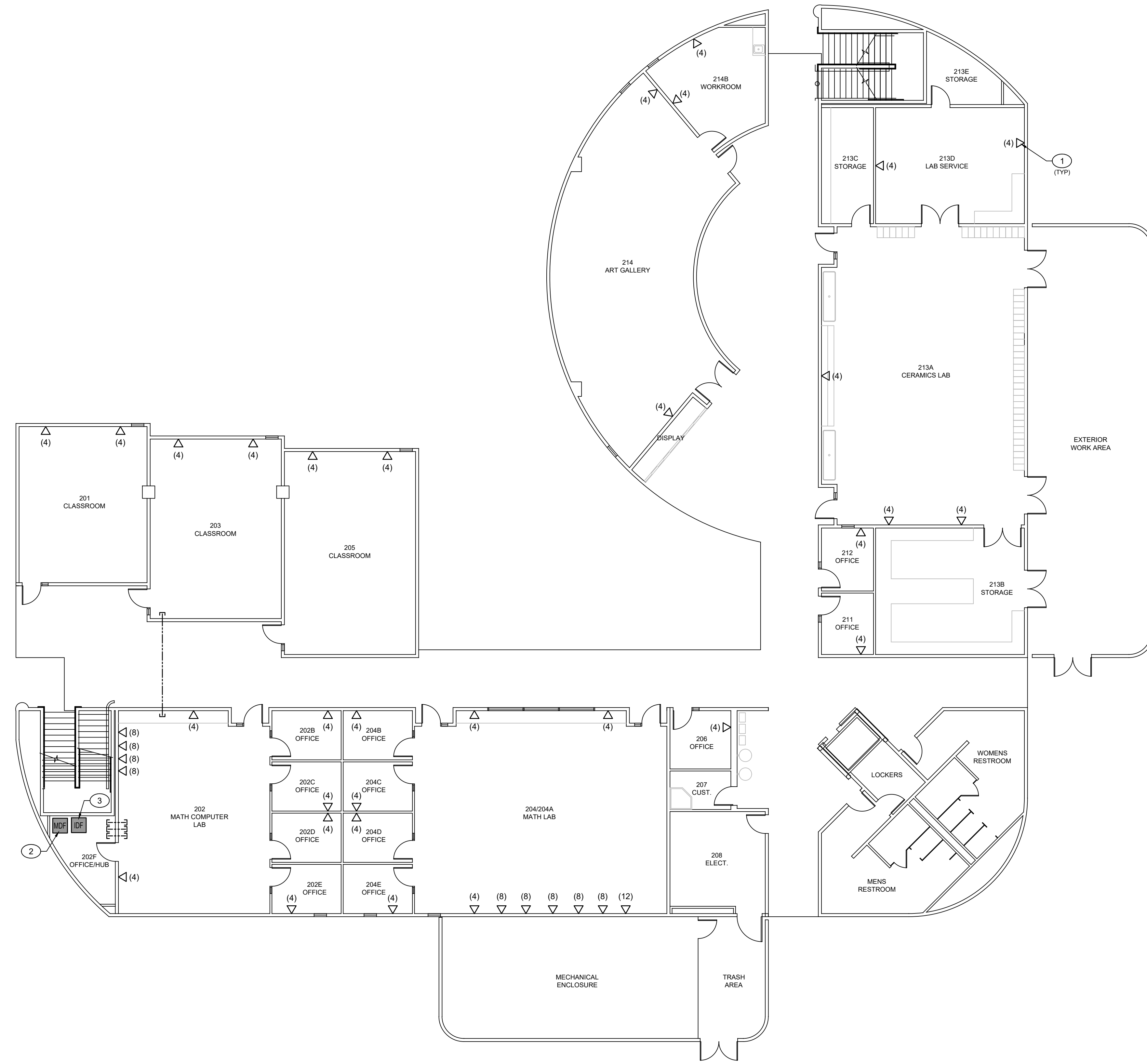
**T0.3B**

**ISSUE DATE**

08/19/2019

**PROJECT**

0023-18C.1



**GENERAL NOTES**

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2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

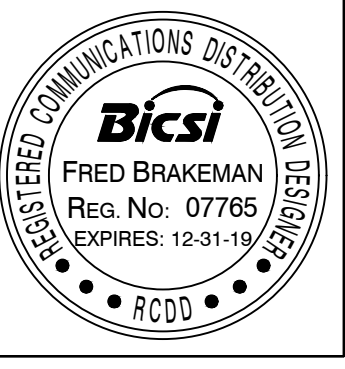
NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) MDF CABINET TO REMAIN.
- ③ REMOVE AND REPLACE (E) IDF RACK WITH (N) 90" 2 POST RACK. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

① **KAWEAH BUILDING - 1ST FLOOR**  
1" = 10'-0"

**COLLEGE OF THE SEQUOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277

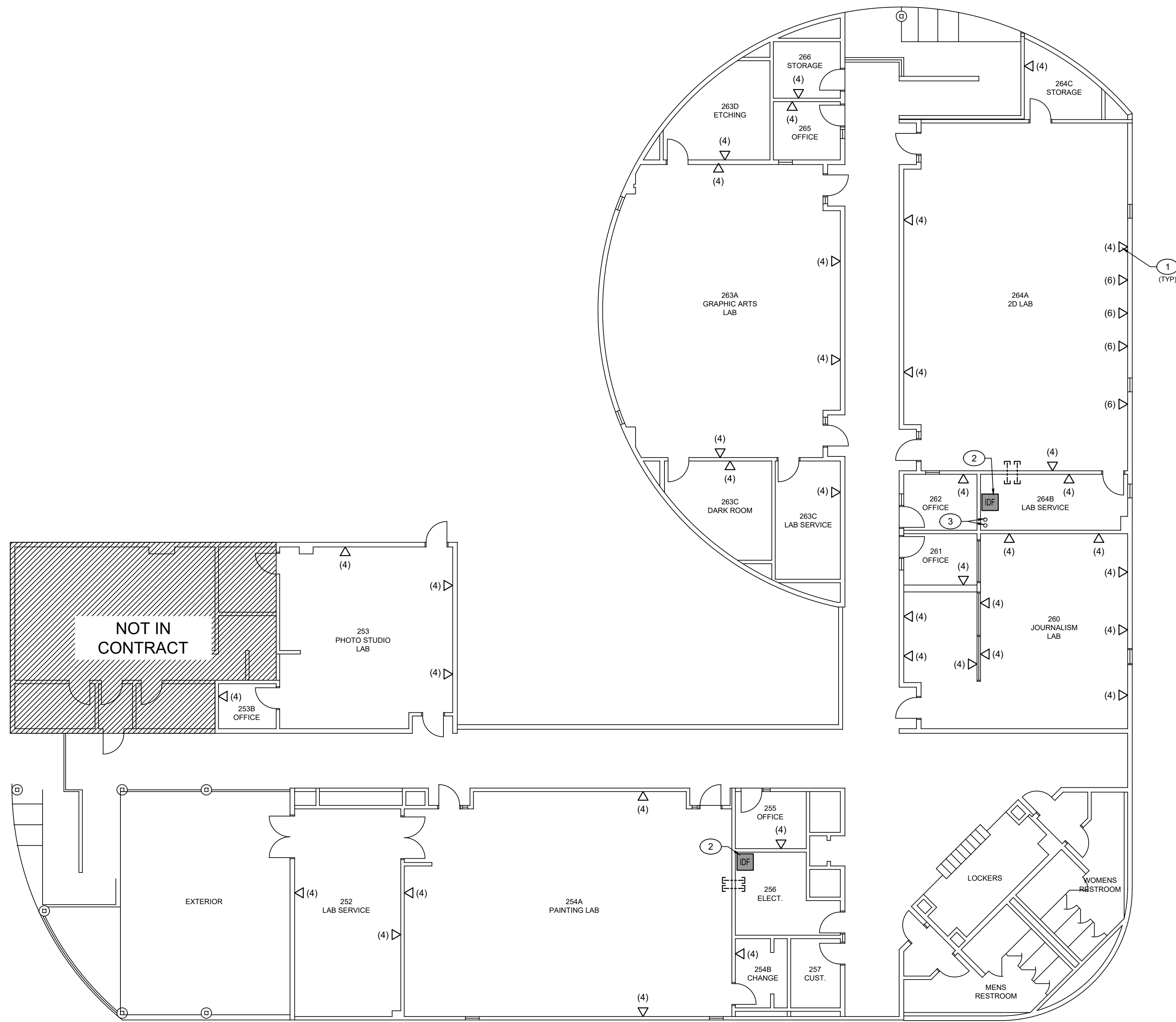
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**SHEET DESCRIPTION**  
KAWEAH  
BUILDING  
1ST FLOOR

**SHEET NUMBER**  
T0.4

**ISSUE DATE**  
08/19/2019  
**PROJECT** 0023-18C.1



**GENERAL NOTES**

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2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) IDF CABINET TO REMAIN.
- ③ (2) 4 1/2" CORE HOLES DOWN TO 1ST FLOOR FOR 4" CONDUIT STUBS.

① **KAWEAH BUILDING - 2ND FLOOR**  
1" = 10'-0"

**COLLEGE OF THE SEQUOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277

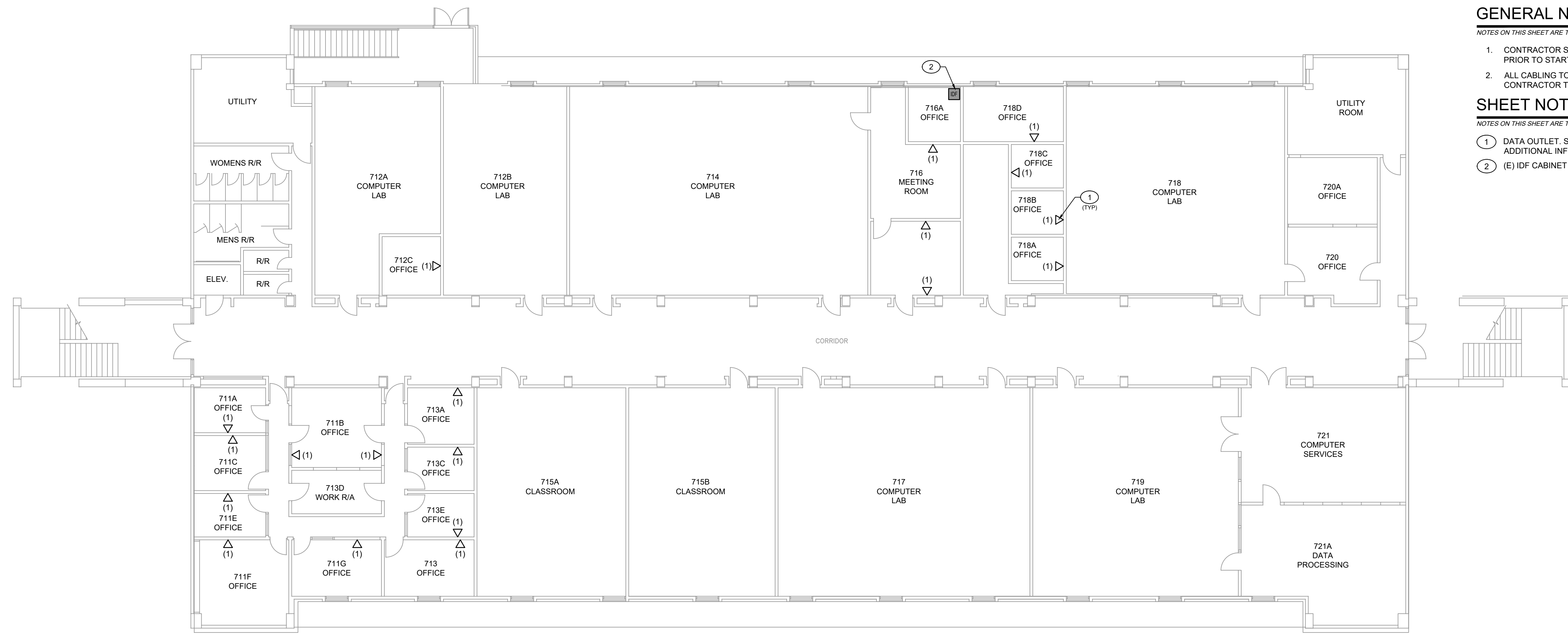
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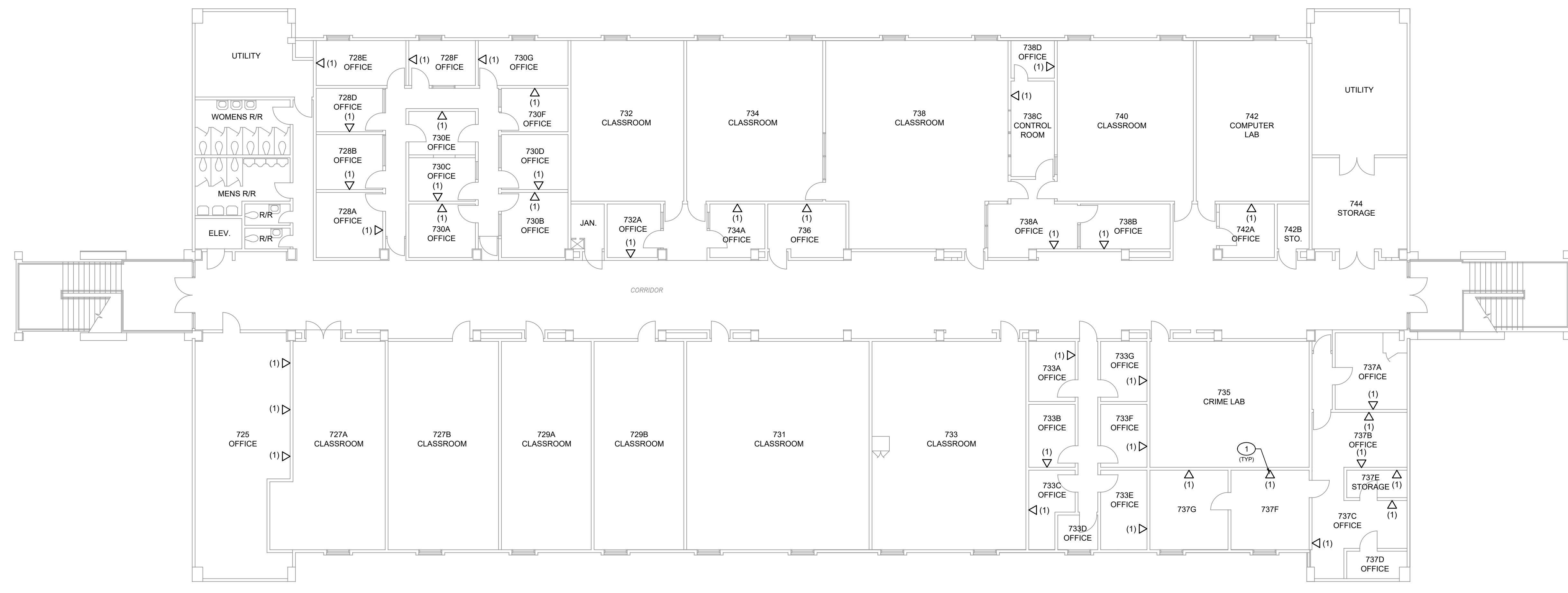
**SHEET DESCRIPTION**  
KAWEAH  
BUILDING  
2ND FLOOR

**SHEET NUMBER**  
T0.4B

**ISSUE DATE**  
08/19/2019  
**PROJECT** 0023-18C.1



1 KERN BUILDING - FIRST FLOOR PLAN  
3/32" = 1'-0"



2 KERN BUILDING - SECOND FLOOR PLAN  
3/32" = 1'-0"

**GENERAL NOTES**

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**SHEET NOTES**

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- 1 DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- 2 (E) IDF CABINET TO REMAIN.

**COLLEGE OF THE SEQUIOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUIOIAS  
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VISALIA, CA 93277

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SHEET DESCRIPTION  
KERN  
BUILDING  
1ST & 2ND  
FLOOR PLANS

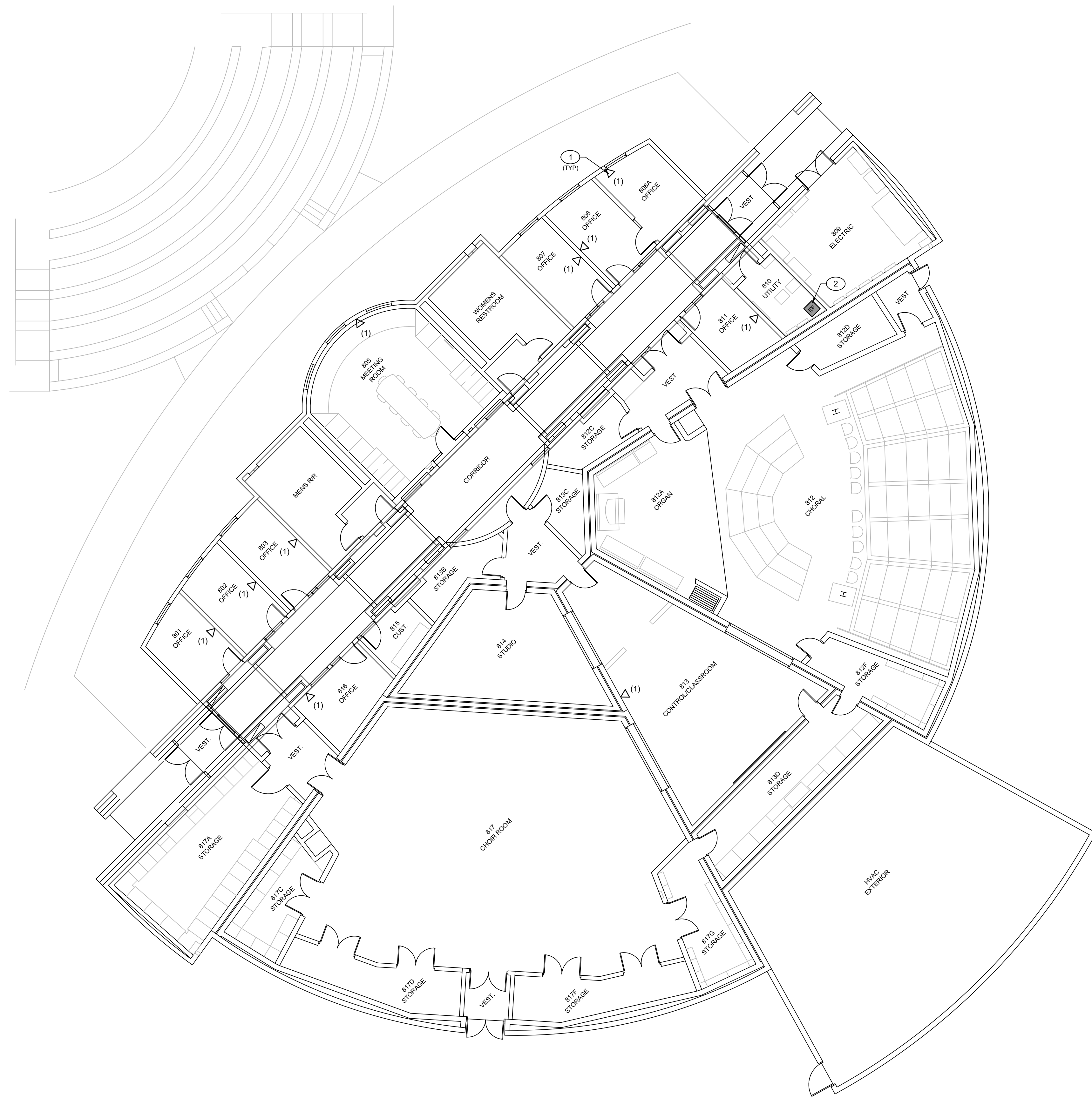
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T0.5

ISSUE DATE  
08/19/2019  
PROJECT 0023-18C.1









**GENERAL NOTES**

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**SHEET NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) IDF CABINET TO REMAIN.

① SIERRA BUILDING - FLOOR PLAN  
1" = 10'-0"

**COLLEGE OF THE SEQUIOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUIOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277

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**SHEET DESCRIPTION**

SIERRA  
BUILDING  
FLOOR  
PLAN

**SHEET NUMBER**

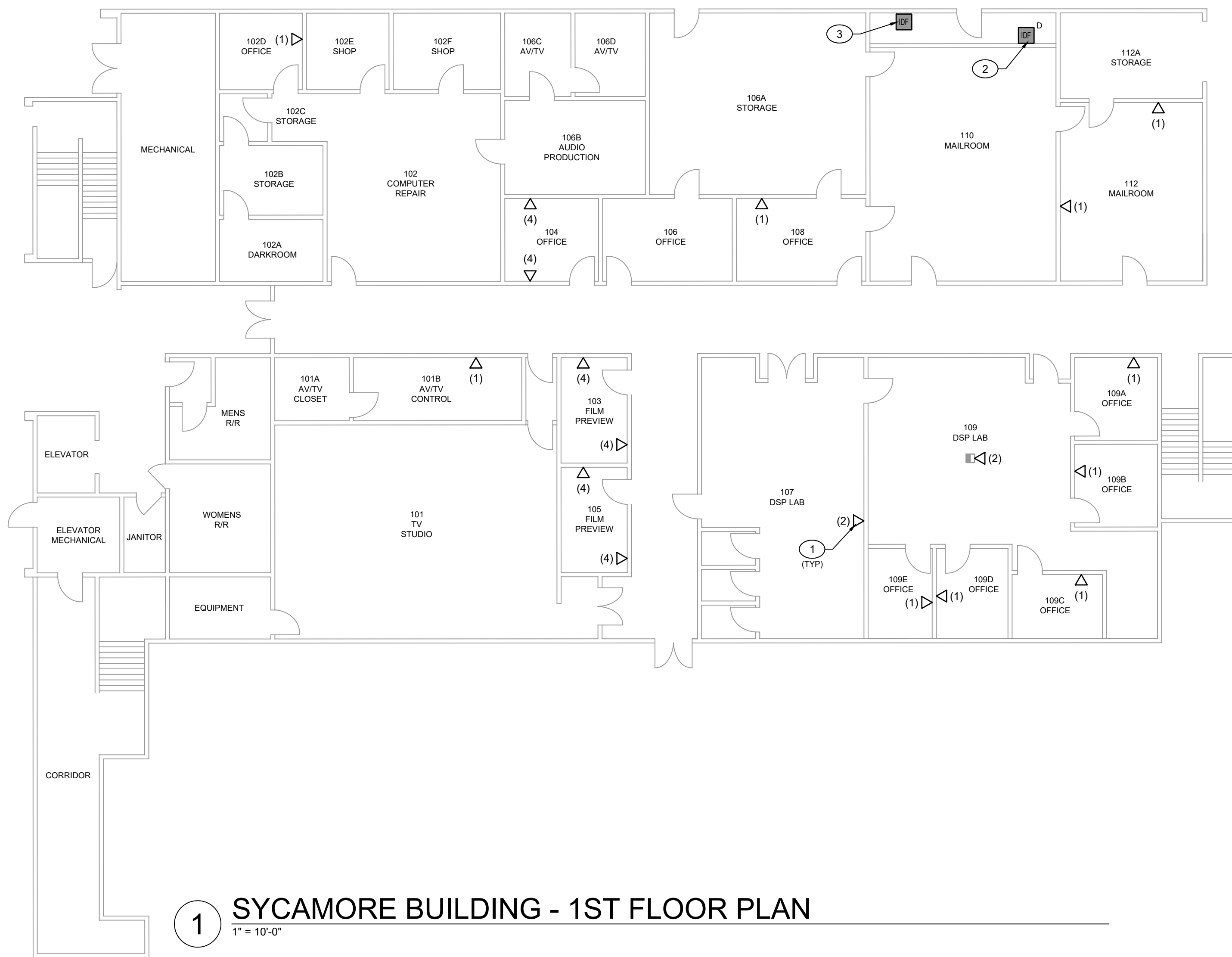
T0.8

**ISSUE DATE**

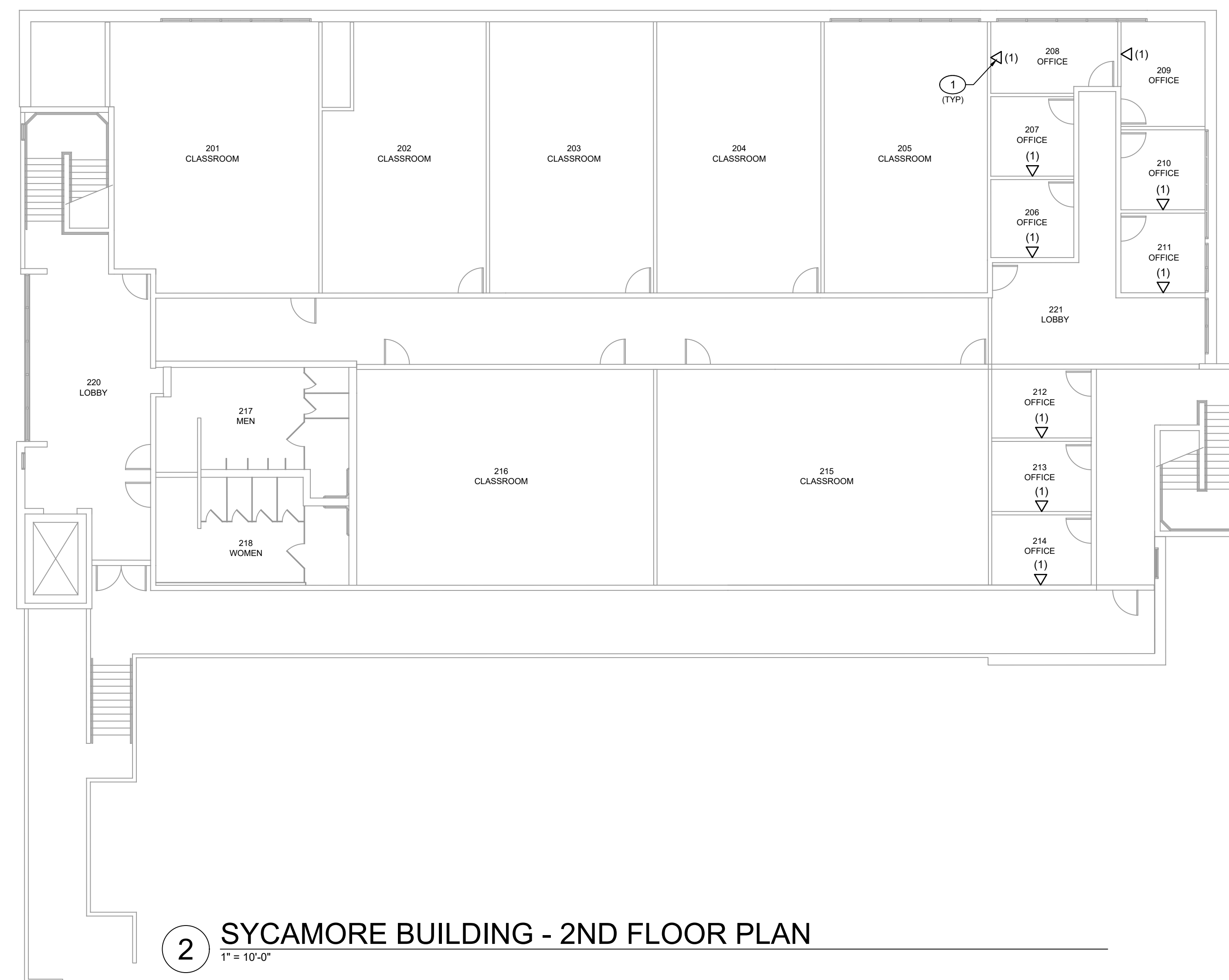
08/19/2019

**PROJECT**

0023-18C.1



**1 SYCAMORE BUILDING - 1ST FLOOR PLAN**  
1" = 10'-0"



**2 SYCAMORE BUILDING - 2ND FLOOR PLAN**  
1" = 10'-0"

**GENERAL NOTES**

NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

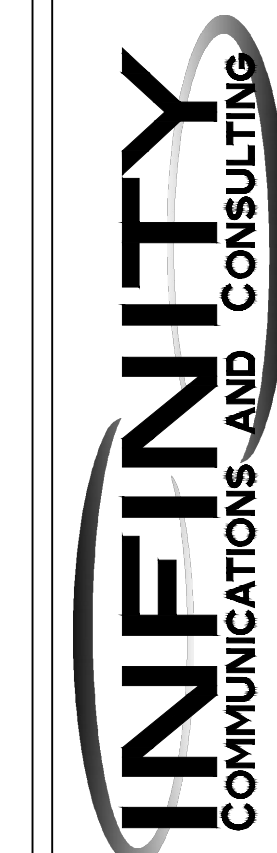
1. CONTRACTOR SHALL FIELD VERIFY ALL DATA DROP CONDITIONS PRIOR TO START OF WORK.
2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

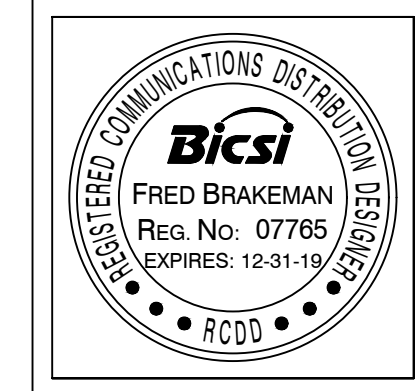
NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (N) IDF CABINET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ③ (E) IDF CABINET TO REMAIN.

**COLLEGE OF THE SEQUIOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUIOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277



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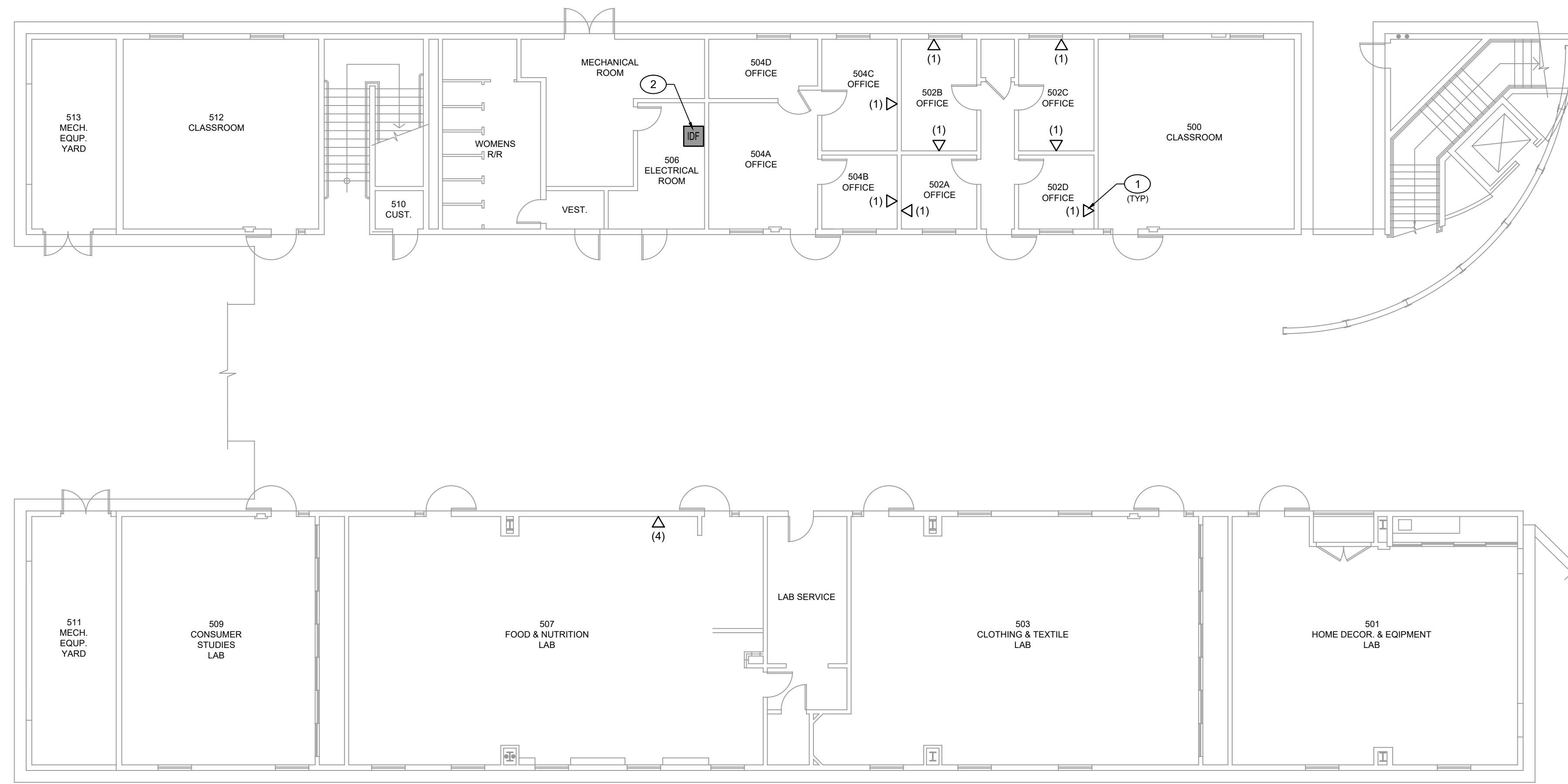


**SHEET DESCRIPTION**  
SYCAMORE  
BUILDING  
1ST & 2ND  
FLOOR PLAN

**SHEET NUMBER**  
T0.9

**ISSUE DATE**  
08/19/2019

**PROJECT** 0023-18C.1



**1 TULE BUILDING - 1ST FLOOR**  
1" = 10'-0"



**2 TULE BUILDING - 2ND FLOOR**  
1" = 10'-0"

**GENERAL NOTES**

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2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

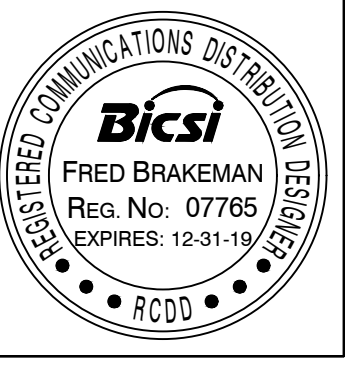
**SHEET NOTES**

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- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) IDF CABINET TO REMAIN.

**COLLEGE OF THE SEQUIOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUIOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277

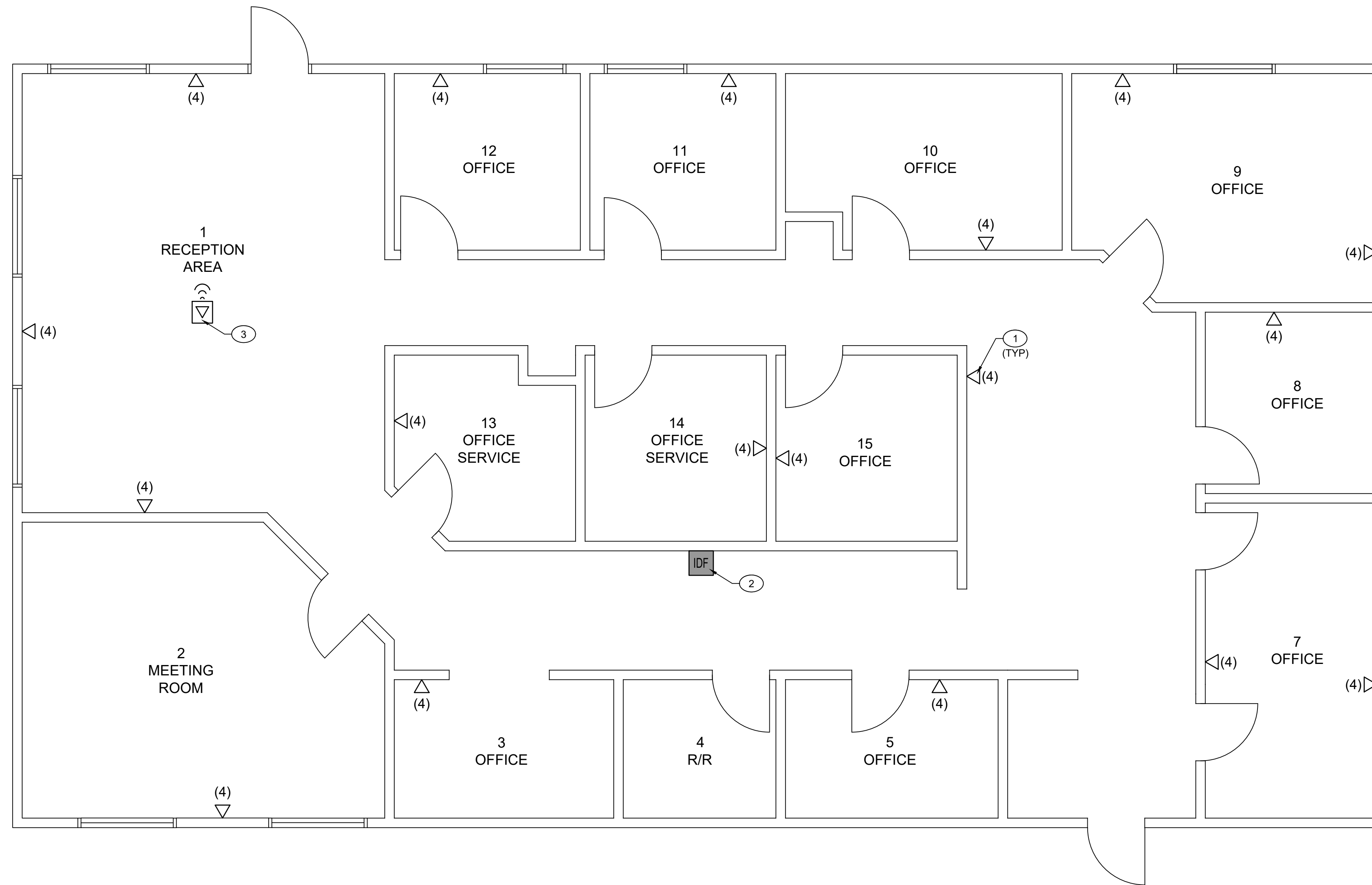
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**SHEET DESCRIPTION**  
TULE  
BUILDING  
1ST & 2ND  
FLOOR

**SHEET NUMBER**  
T0.10

**ISSUE DATE**  
08/19/2019  
**PROJECT** 0023-18C.1



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2. ALL CABLING TO REMAIN OPERATIONAL DURING INSTALLATION. CONTRACTOR TO DEMO ALL CABLING AFTER CUT OVER.

**SHEET NOTES**

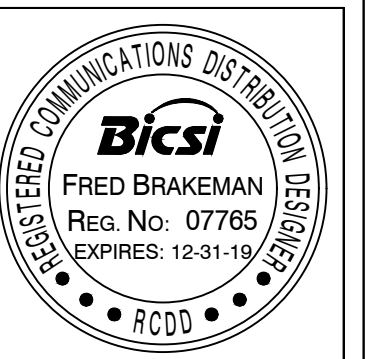
NOTES ON THIS SHEET ARE TO BE USED ON THIS SHEET ONLY.

- ① DATA OUTLET. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.
- ② (E) IDF CABINET TO REMAIN.
- ③ WIRELESS ACCESS POINT. SEE TITLE SHEET FOR ADDITIONAL INFORMATION.

**1 UNIVERSITY BUILDING - FLOOR PLAN**  
3/8" = 1'-0"

**COLLEGE OF THE SEQUOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUOIAS  
915 S. MOONEY DR.  
VISALIA, CA 93277

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**SHEET DESCRIPTION**

UNIVERSITY  
BUILDING  
FLOOR  
PLAN

**SHEET NUMBER**

**T0.11**

**ISSUE DATE**

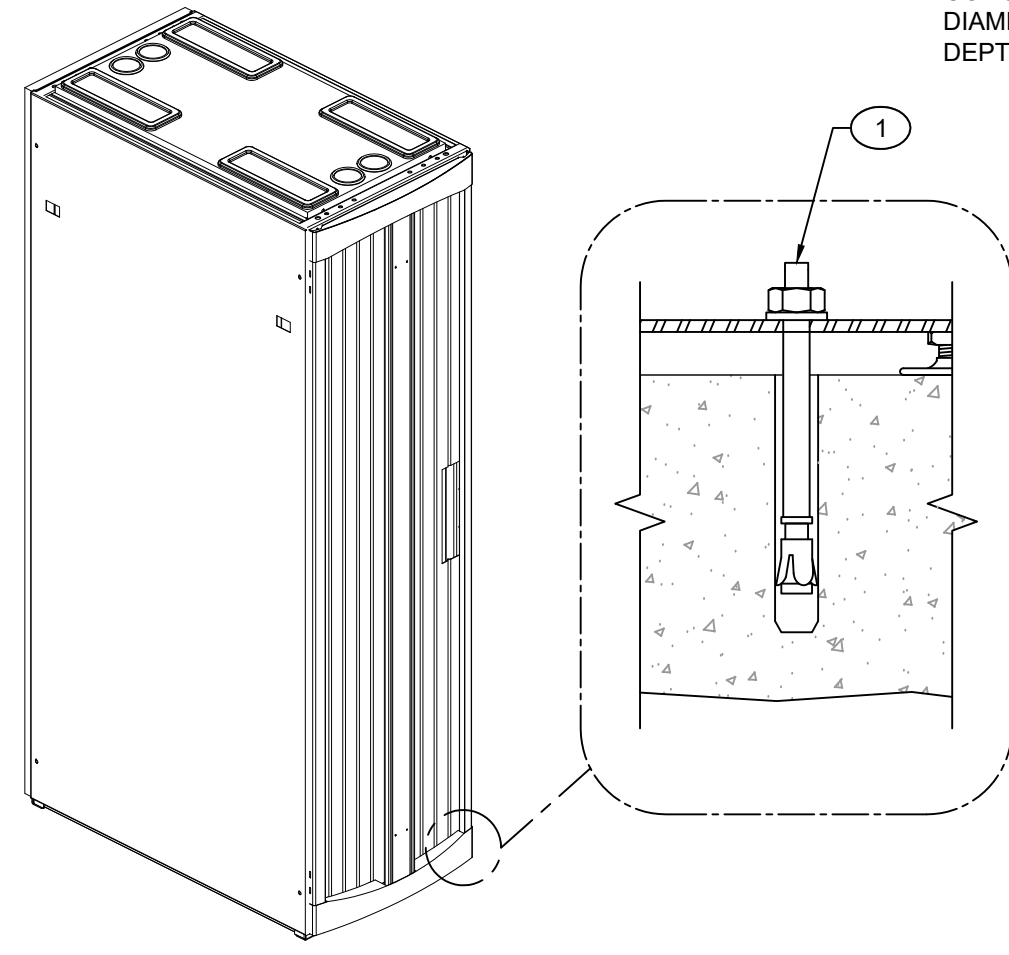
08/19/2019

**PROJECT**

0023-18C.1

**NOTES:**

- FLOOR MOUNT CABINETS SHALL BE SECURED TO CONCRETE FLOOR PER ESR/ICC 1917 WITH 1/2" DIAMETER HILTI KWIK TZ BOLTS, MINIMUM EMBED DEPTH OF 2" AT EACH CORNER.



**1 CABINET FLOOR MOUNTING DETAIL**  
NOT TO SCALE

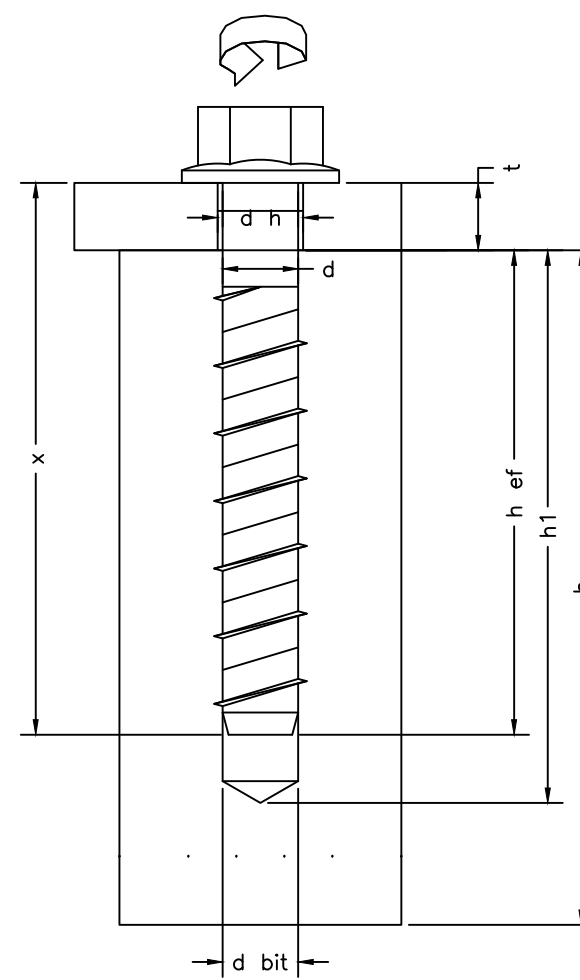
**HUS-H CONCRETE SCREW ANCHOR**

- DRILL HOLES PERPENDICULAR TO THE CONCRETE SURFACE, USING ANSI B212.15 MATCHED TOLERANCE CARBIDE-TIPPED MASONRY DRILL BITS. DRILLED HOLE SPECIFICATIONS (EMBEDMENT AND DEPTH), EDGE DISTANCE, AND SPACING REQUIREMENTS LISTED IN ICC ESR-1423 SHALL BE OBSERVED.
- ALLOWABLE LOADS ARE NOT PERMITTED TO BE INCREASED FOR WIND OR EARTHQUAKE LOADING. WHEN USING THE ALTERNATIVE BASIC LOAD COMBINATIONS IN IBC SECTION 1605.3.2 THAT INCLUDES WIND OR SEISMIC LOADS, THE ALLOWABLE SHEAR AND TENSION LOADS ARE ALLOWED TO INCREASE BY 33 1/3 PERCENT.
- USE OF ANCHORS IS LIMITED TO DRY, INTERIOR LOCATIONS.
- WHEN PROOF LOADING IS NECESSARY, PROOF LOAD SHALL BE BETWEEN 150-200%% OF HILTI PUBLISHED ALLOWABLE TENSION LOAD.
- ANCHORS SHALL BE TIGHTENED WITH A CALIBRATED TORQUE WRENCH. TORQUE TO THE LOAD LISTED IN THE TABLE BELOW.
- CONTACT HILTI TECHNICAL SUPPORT AT 1-800-879-8000 FOR ADDITIONAL ASSISTANCE WITH HUS-H ANCHOR INSTALLATIONS. ANCHORS INSTALLATION AND USAGE SHALL COMPLY WITH ICC ESR-1423.

**INSTALLATION INSTRUCTIONS:**

- DRILL HOLE IN UNCRACKED CONCRETE WITH A CARBIDE MASONRY DRILL BIT (SEE NOTE 1 ABOVE) TO SPECIFIED DEPTH.
- HOLE DEPTH SHALL BE EQUAL TO THE EMBEDMENT LENGTH OF THE ANCHOR PLUS 3/8".
- CLEAN HOLE WITH OIL FREE COMPRESSED AIR. ALL DUST AND OTHER MATTER MUST BE REMOVED BEFORE ANCHOR IS INSTALLED.
- USING AN IMPACT WRENCH, INSTALL ANCHOR INTO HOLE UNTIL FLUSH AGAINST TOP OF FIXTURE.
- OR, USING A TORQUE WRENCH INSTALL ANCHOR INTO HOLE UNTIL FLUSH AGAINST TOP OF FIXTURE. DO NOT EXCEED TMAX.
- FOR EMBEDMENTS LESS THAN 2-1/2": TO MINIMIZE POTENTIAL CONCRETE THREAD DAMAGE FROM OVER SPINNING, SET THE IMPACT WRENCH TRIGGER TO ITS LOWEST INSTALLATION TORQUE.

**HUS-H SCREW ANCHOR**

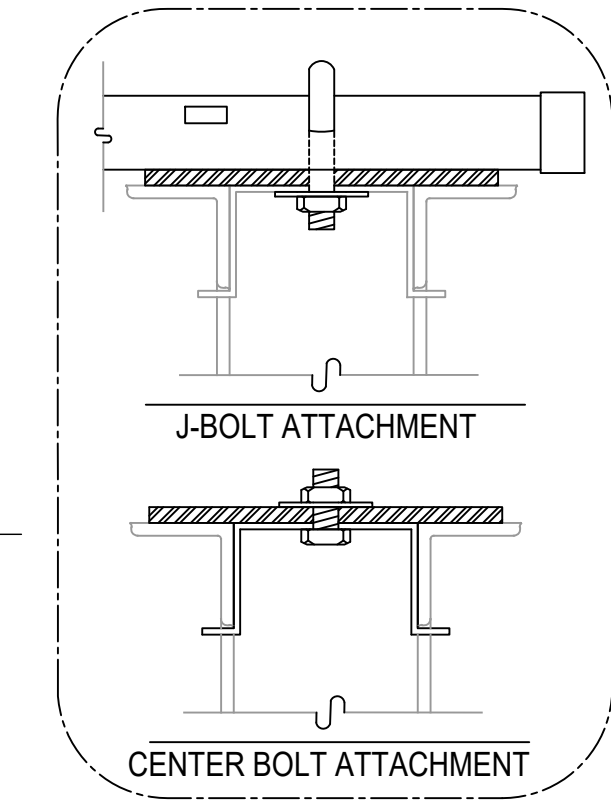
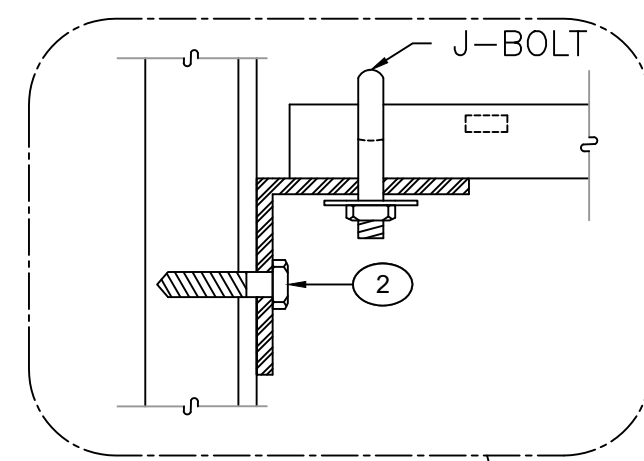


**HUS-H SPECIFICATION TABLE**

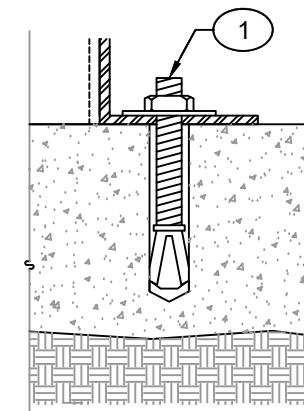
DETAILS	NOMINAL ANCHOR DIAMETER			
	in.	3/8	1/2	5/8
	(mm)	(9.5)	(12.7)	(15.9)
$f_{t,all}$ : nominal tensile strength <sup>1</sup>	in.	9716	7116	9716
$f_{u,all}$ : minimum / standard / deep depth of embedment	in.	2 (51)	2.34 (59)	2.38 (60)
$f_{u,all}$ : minimum hole depth	in.	$f_{u,all} + 3/8$ ( $f_{u,all} + 9.5$ )	$f_{u,all} + 3/8$ ( $f_{u,all} + 9.5$ )	$f_{u,all} + 3/8$ ( $f_{u,all} + 9.5$ )
$T_{max}$ : maximum tightening torque	ft. lb. (Nm)	26 (35)	33 (45)	48 (65)
$e_{min}$ : minimum thread clearance hole in plate	in.	7/16 (11.1)	9/16 (14.3)	1 1/16 (17.5)
$b$ : minimum base material thickness		3" (76 mm) or 1.3 $f_{u,all}$ whichever is greater		

<sup>1</sup> Hilti standard ANSI carbide tipped bit bits, see section 7.4.1 of Hilti's 2005 Product Technical Guide.

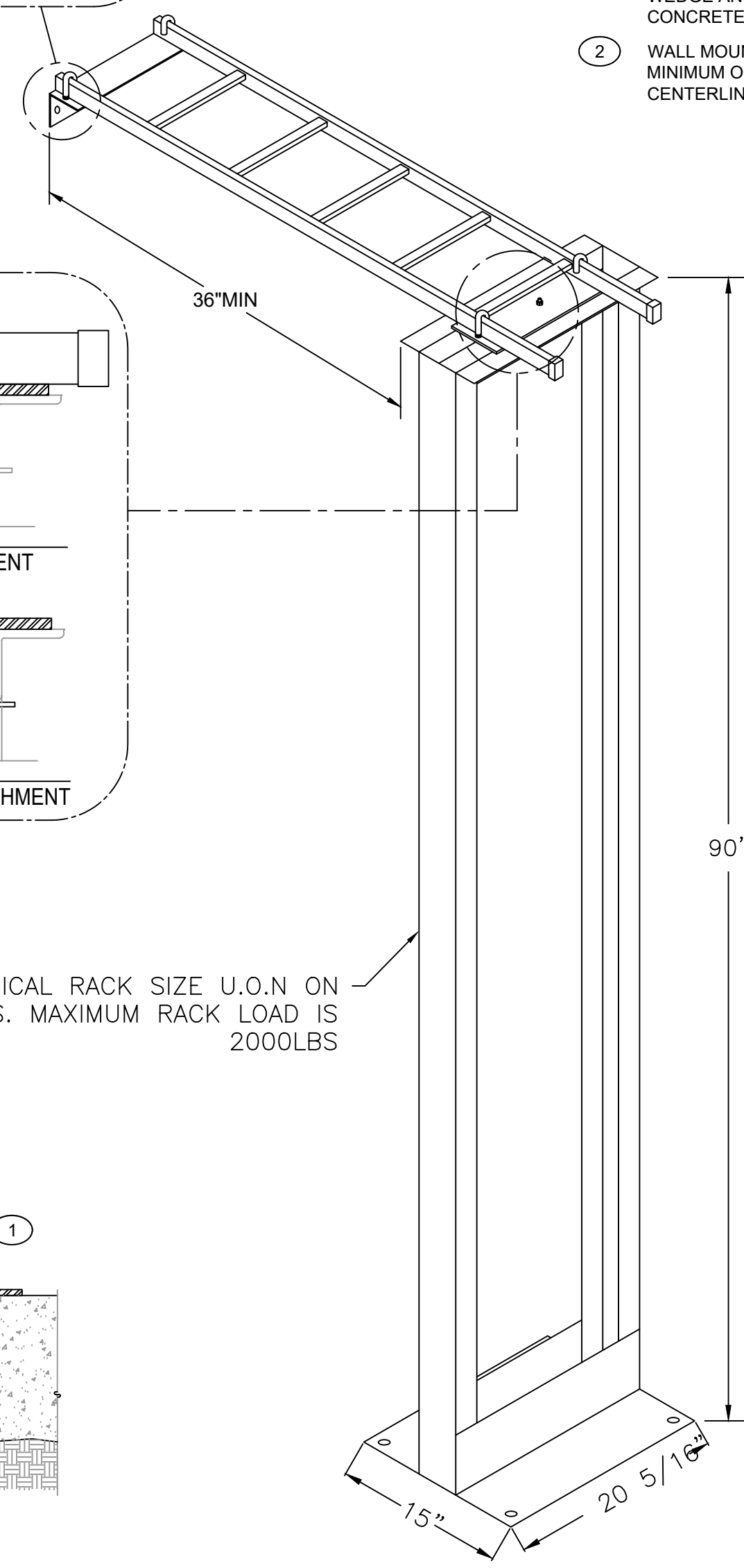
**5 CONCRETE LAG BOLT INSTALLATION DETAIL**  
NOT TO SCALE



TYPICAL RACK SIZE U.O.N ON PLANS. MAXIMUM RACK LOAD IS 2000LBS

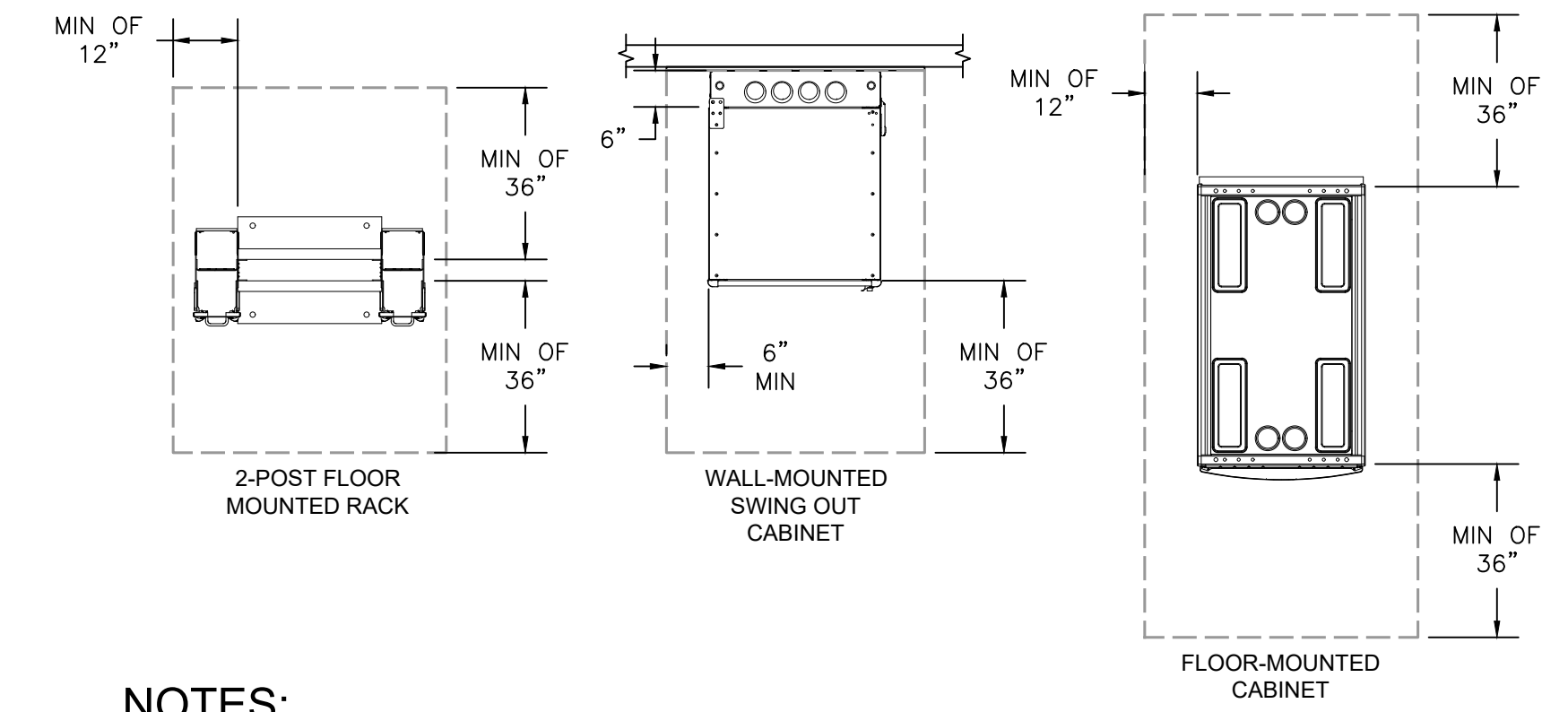


**3 FLOOR MOUNTED 2 POST RACK DETAIL**  
NOT TO SCALE



**NOTES:**

- RACK AS SHOWN PER PLANS AND AS SPECIFIED IN PROJECT MANUAL.
  - CABLE RUNWAY WALL TO RACK KIT EQUAL TO CHATSWORTH #11911-712.
  - BRACE TOP, BOTH DIRECTIONS, WITH CHATSWORTH UNIVERSAL EARTHQUAKE BRACING KIT.
- FLOOR MOUNT RACK TO BE SECURED TO CONCRETE FLOOR WITH A MINIMUM OF FOUR (4) 3/8" DIAMETER WEDGE ANCHOR BOLTS, MINIMUM EMBEDDED CONCRETE DEPTH OF 1-3/4". EQUAL TO ICC ESR #1917.
  - WALL MOUNT KITS WILL BE SECURED TO WALL WITH A MINIMUM OF TWO (2) 3/8" X 4" LAG BOLTS AT CENTERLINE OF STUD.



**NOTES:**

- NEC CODE OR A.H.J. SHALL TAKE PRECEDENCE OVER LISTED CLEARANCE REQUIREMENTS IN DETAIL.
- REQUIRED CLEARANCES**
- 36" OF CLEAR, UNOBSTRUCTED SPACE FOR THE INSTALLATION AND MAINTENANCE OF ALL CABLING EQUIPMENT MOUNTED ON WALLS/RACKS/CABINETS/ENCLOSURES.
  - 6" DEPTH OFF THE WALL SHOULD BE PROVIDED FOR WALL-MOUNTED EQUIPMENT.
  - aisle space of AT LEAST 3.28' WIDE IN FRONT AND IN THE REAR OF THE SPACE FOR EACH EQUIPMENT RACK/CABINET/ENCLOSURE.
- RECOMMENDED CLEARANCES**
- IN CORNERS, A MINIMUM SIDE CLEARANCE OF 12" AT LEAST 3.28' WIDE, 3.28' DEEP, 7.5' HIGH
  - FOR EACH EQUIPMENT RACK/CABINET/ENCLOSURE.

**2 CLEARANCE REQUIREMENTS**  
NOT TO SCALE

**COLLEGE OF THE SEQUIOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUIOIAS  
VISALIA, CA 93277  
915 S. MOONEY DR.

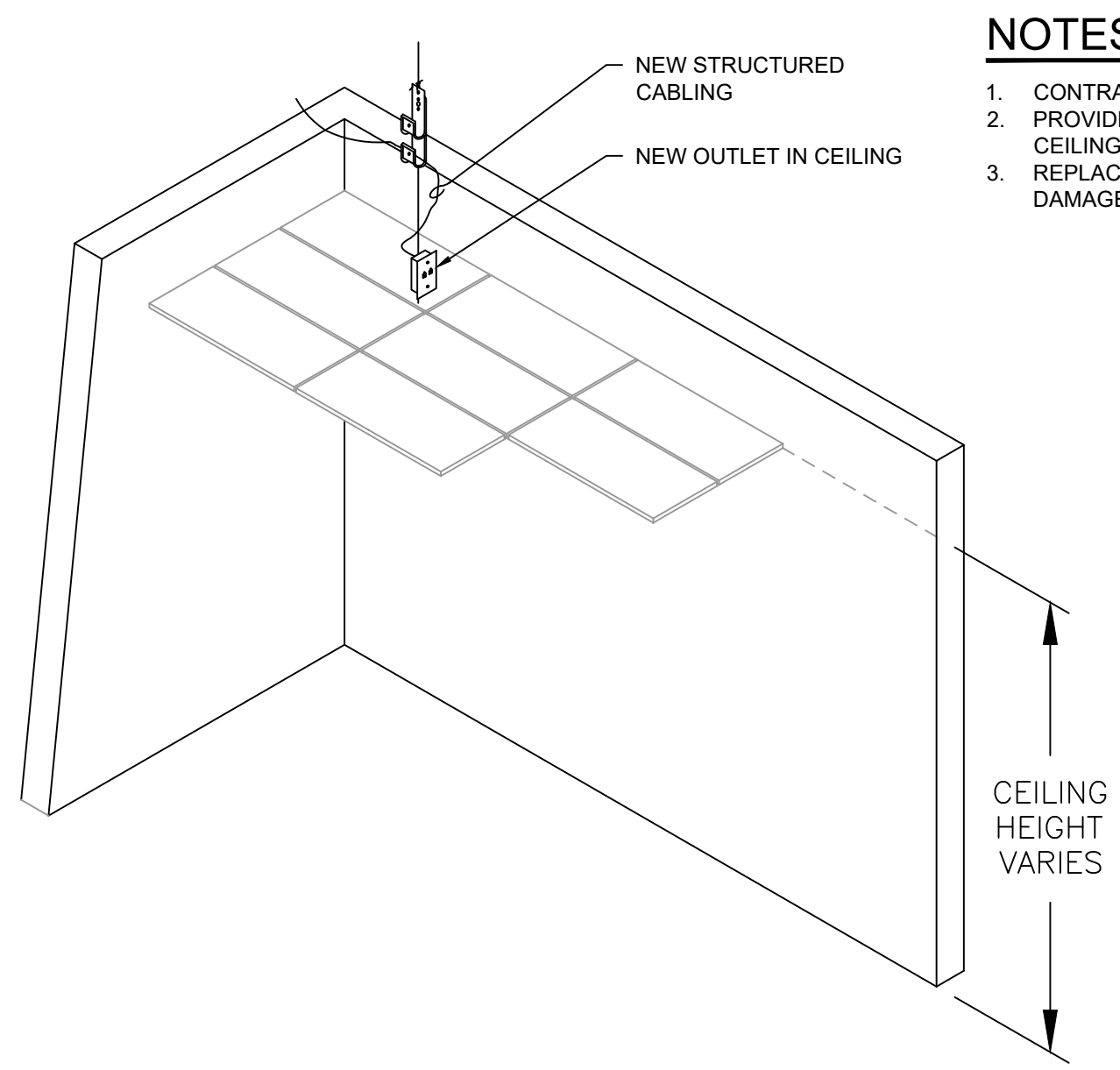
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**SHEET DESCRIPTION**  
INSTALLATION  
DETAILS

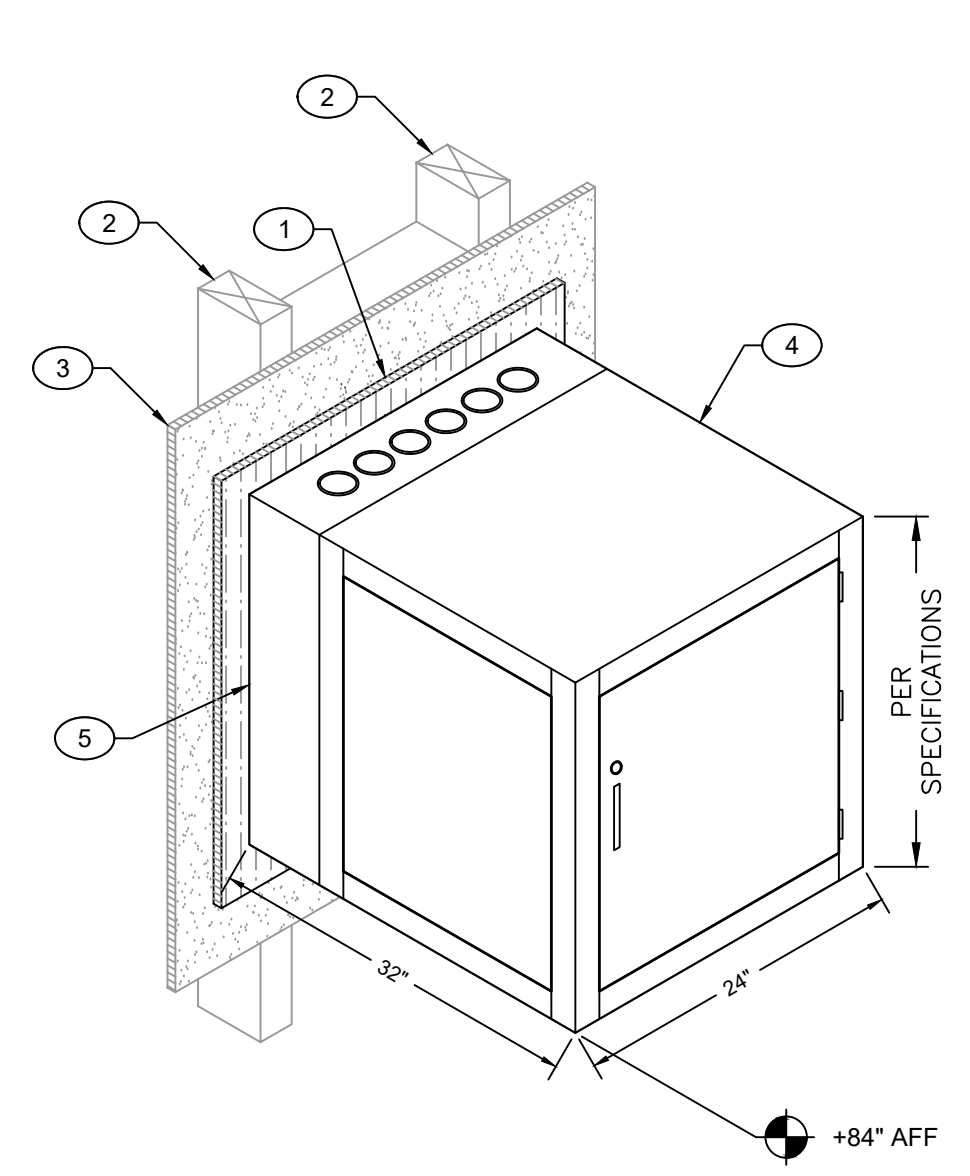
**SHEET NUMBER**  
T4.1

**ISSUE DATE**  
08/19/2019  
**PROJECT** 0023-18C.1

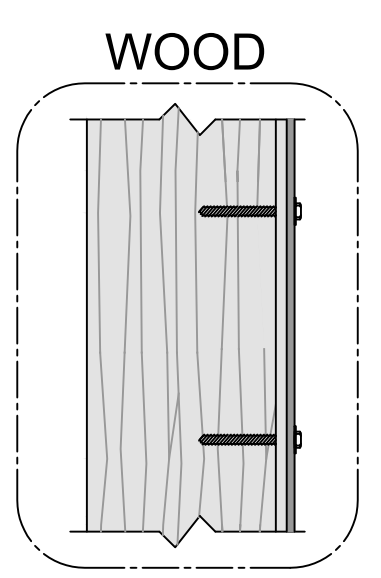


- NOTES:**
1. CONTRACTOR TO PROVIDE ALL T-BAR WIRES AND ATTACHMENTS.
  2. PROVIDE STRUCTURED CABLING AS SPECIFIED, TERMINATE AT CEILING BOX AS SHOWN.
  3. REPLACE ANY BROKEN TILES, ALERT OWNER TO AND PREVIOUS DAMAGE PRIOR TO INSTALLATION.

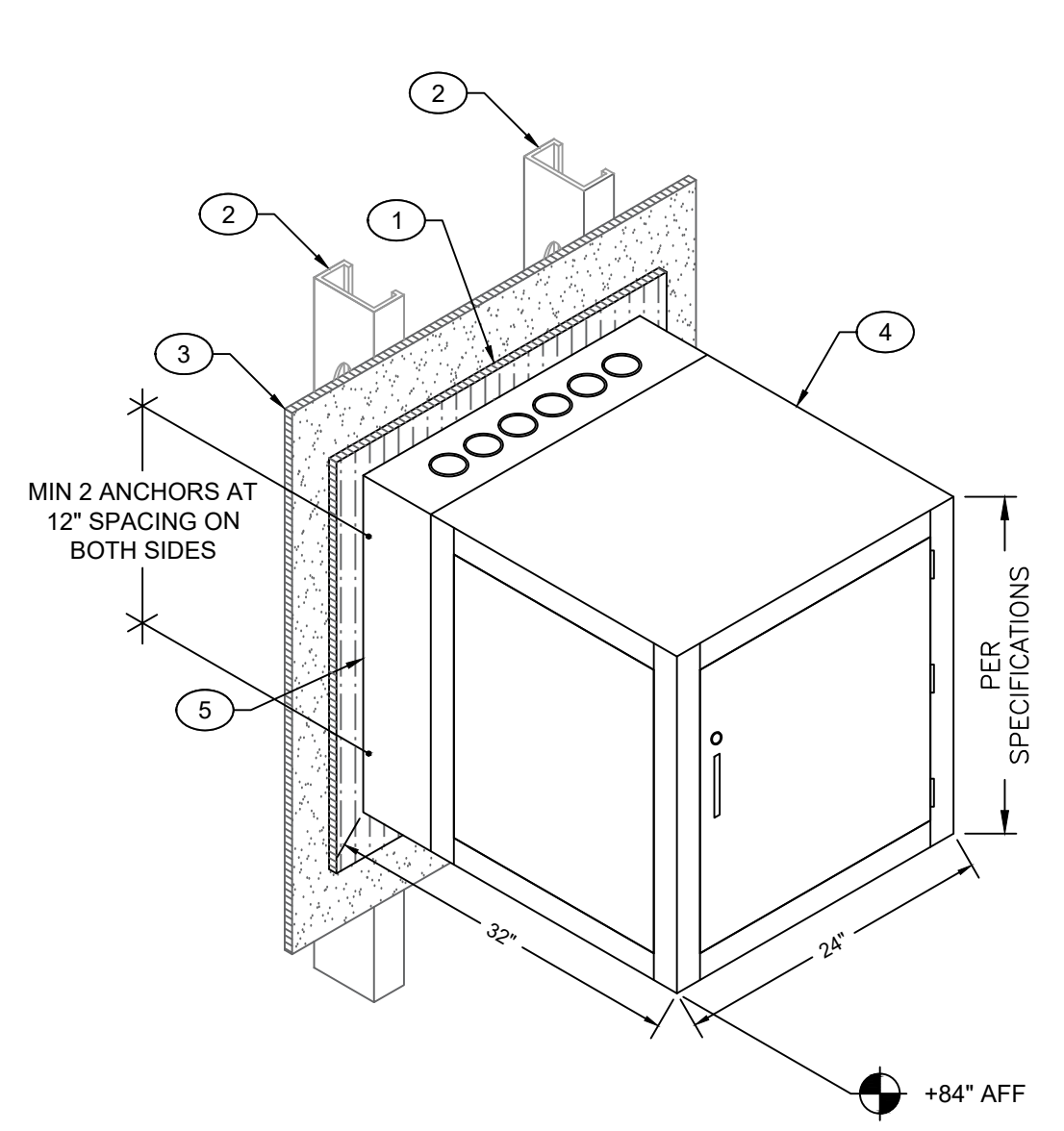
**1 CEILING WIRELESS ACCESS POINT OUTLET**  
NOT TO SCALE



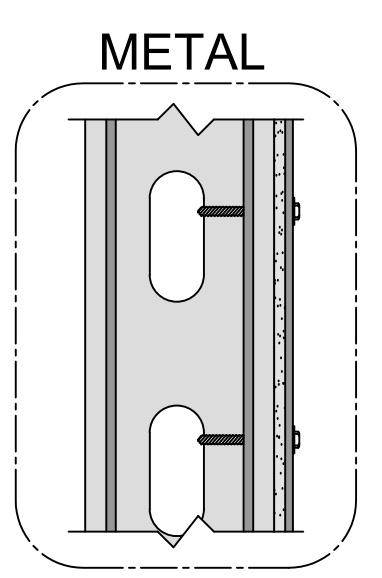
- NOTES:**
1. 3/4" PLYWOOD BACKBOARD 6" MINIMUM CLEARANCE AROUND CABINET ON ALL SIDES
  2. EXISTING STUDS PER PLANS
  3. EXISTING DRYWALL
  4. WALL MOUNTED CABINET 250LBS MAX WEIGHT.
  5. SECURE BACK CAN PER MANUFACTURERS INSTRUCTIONS FOR APPROPRIATE ANCHORAGE X/TX.X.



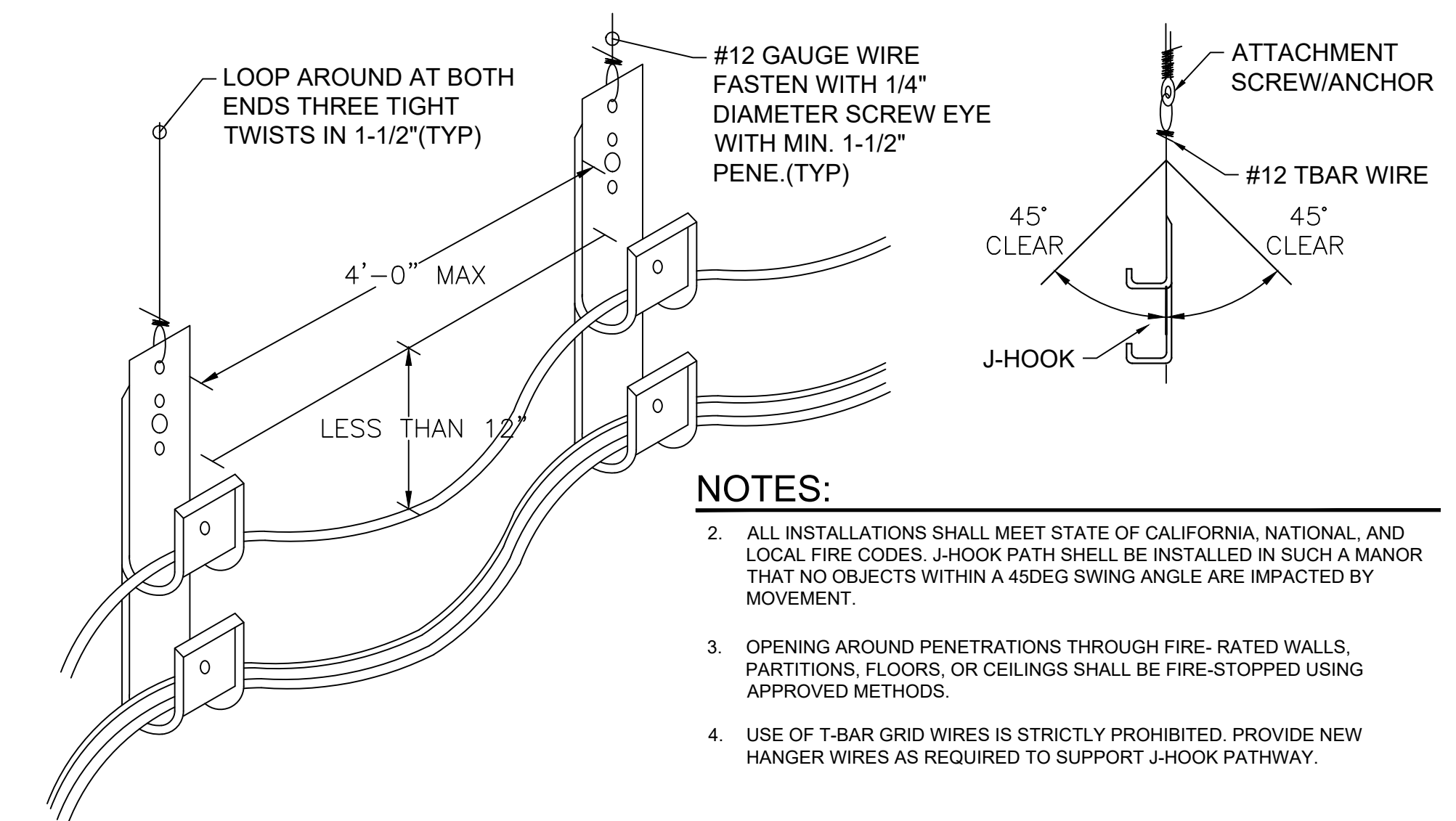
**2 WALL DATA MOUNTED CABINET**  
NOT TO SCALE



- NOTES:**
1. 3/4" PLYWOOD BACKBOARD 6" MINIMUM CLEARANCE AROUND CABINET ON ALL SIDES
  2. (N) METAL STUDS PER PLANS
  3. (N) DRYWALL
  4. WALL MOUNTED CABINET 250LBS MAX WEIGHT.
  5. BACK CAN SECURE PER MANUFACTURERS INSTRUCTIONS FOR APPROPRIATE ANCHORAGE SEE DETAIL X/T.XX.

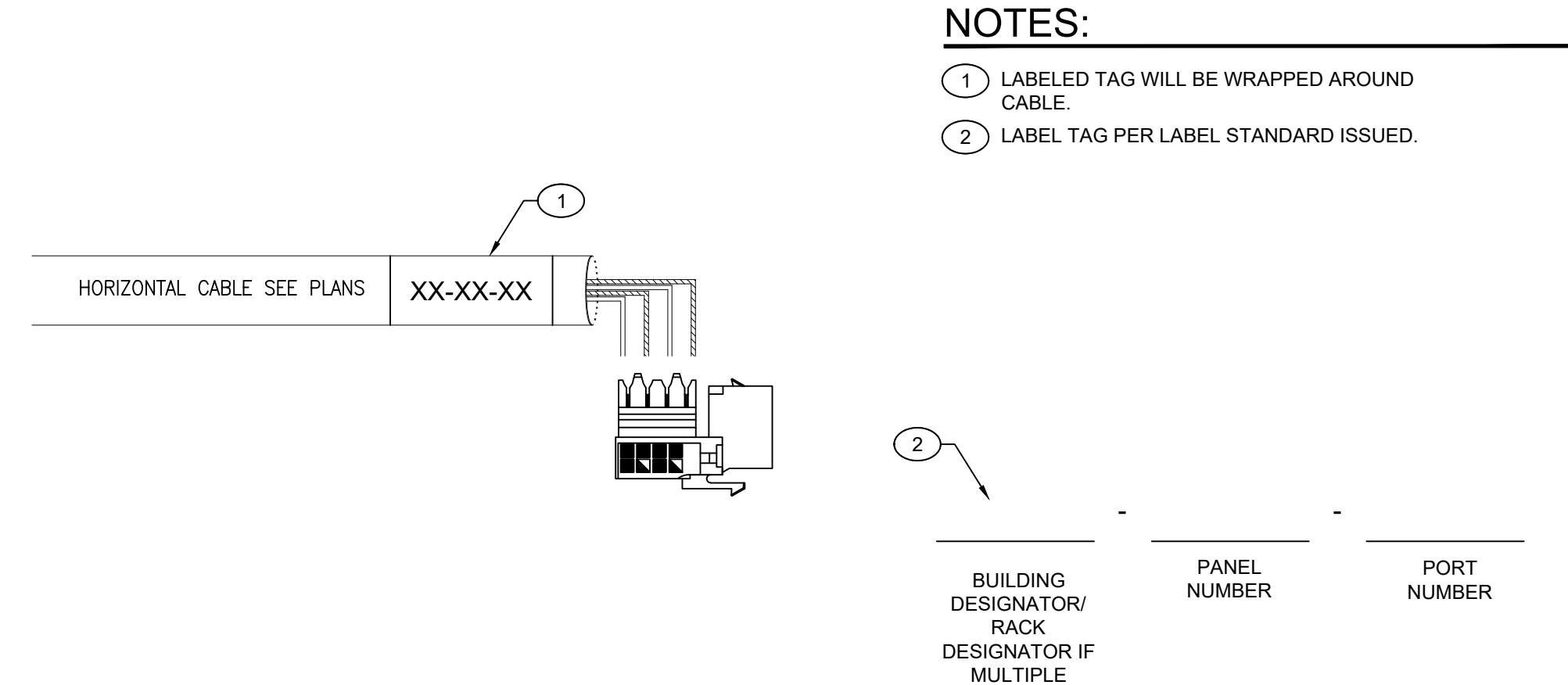


**3 WALL DATA EQUIPMENT MOUNTED CABINET(METAL STUD)**  
NOT TO SCALE



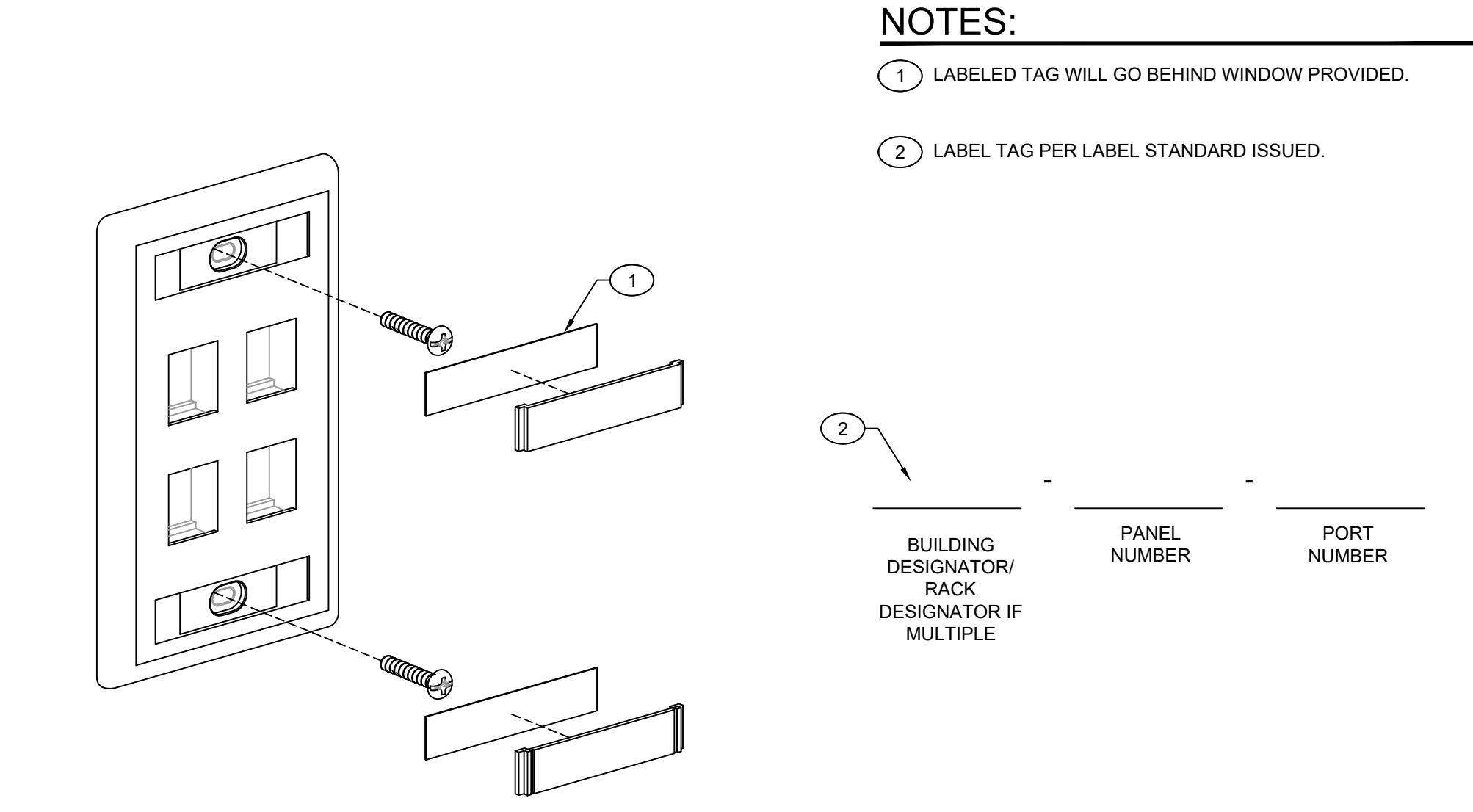
- NOTES:**
2. ALL INSTALLATIONS SHALL MEET STATE OF CALIFORNIA, NATIONAL, AND LOCAL FIRE CODES. J-HOOK PATH SHALL BE INSTALLED IN SUCH A MANNER THAT NO OBJECTS WITHIN A 45DEG SWING ANGLE ARE IMPACTED BY MOVEMENT.
  3. OPENING AROUND PENETRATIONS THROUGH FIRE- RATED WALLS, PARTITIONS, FLOORS, OR CEILINGS SHALL BE FIRE-STOPPED USING APPROVED METHODS.
  4. USE OF T-BAR GRID WIRES IS STRICTLY PROHIBITED. PROVIDE NEW HANGER WIRES AS REQUIRED TO SUPPORT J-HOOK PATHWAY.

**4 J-HOOK PATHWAY DETAIL**  
NOT TO SCALE



- NOTES:**
1. LABELED TAG WILL BE WRAPPED AROUND CABLE.
  2. LABEL TAG PER LABEL STANDARD ISSUED.

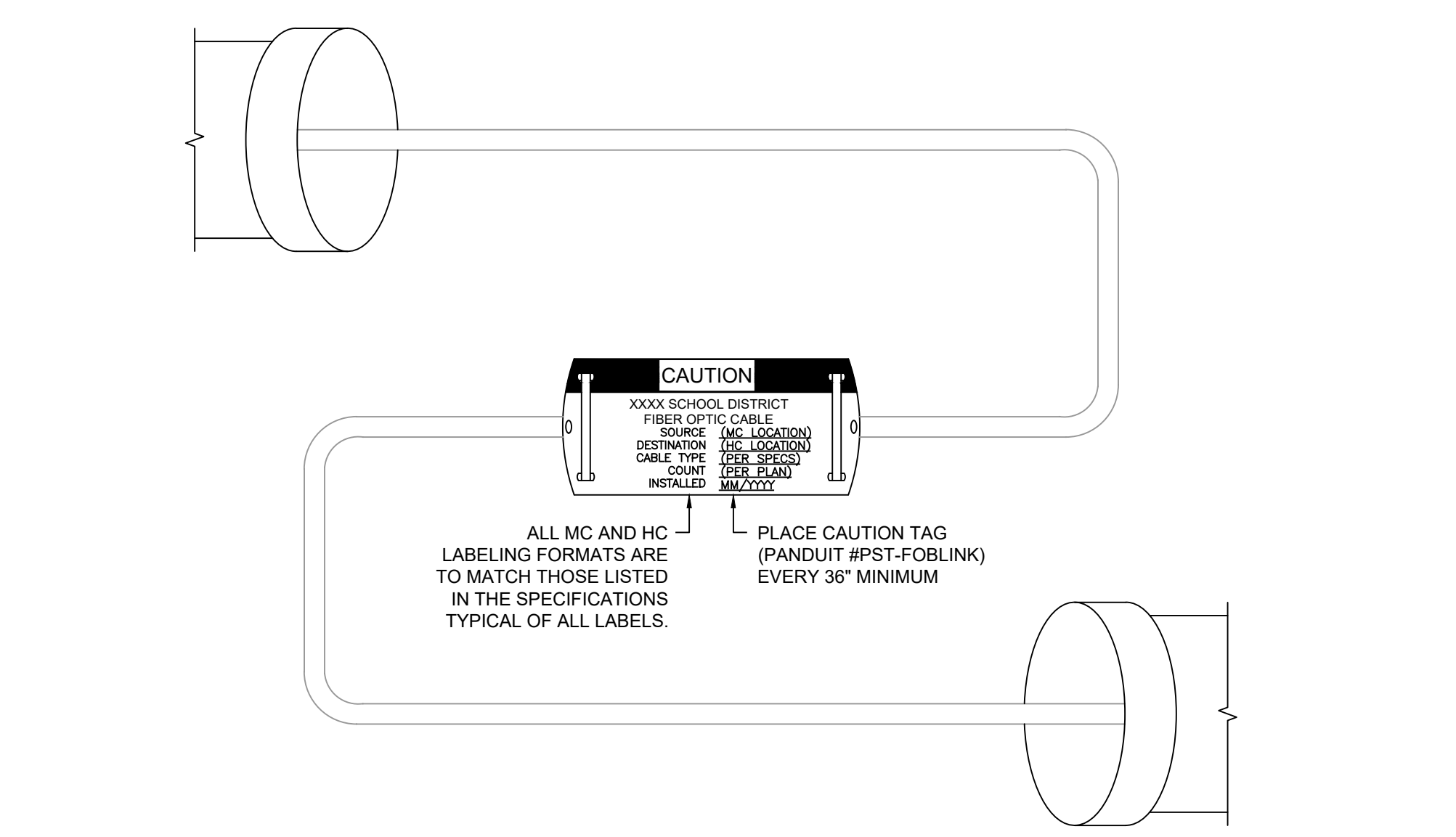
BUILDING DESIGNATOR/ RACK DESIGNATOR IF MULTIPLE	PANEL NUMBER	PORT NUMBER
---	--------------	-------------



- NOTES:**
1. LABELED TAG WILL GO BEHIND WINDOW PROVIDED.
  2. LABEL TAG PER LABEL STANDARD ISSUED.

BUILDING DESIGNATOR/ RACK DESIGNATOR IF MULTIPLE	PANEL NUMBER	PORT NUMBER
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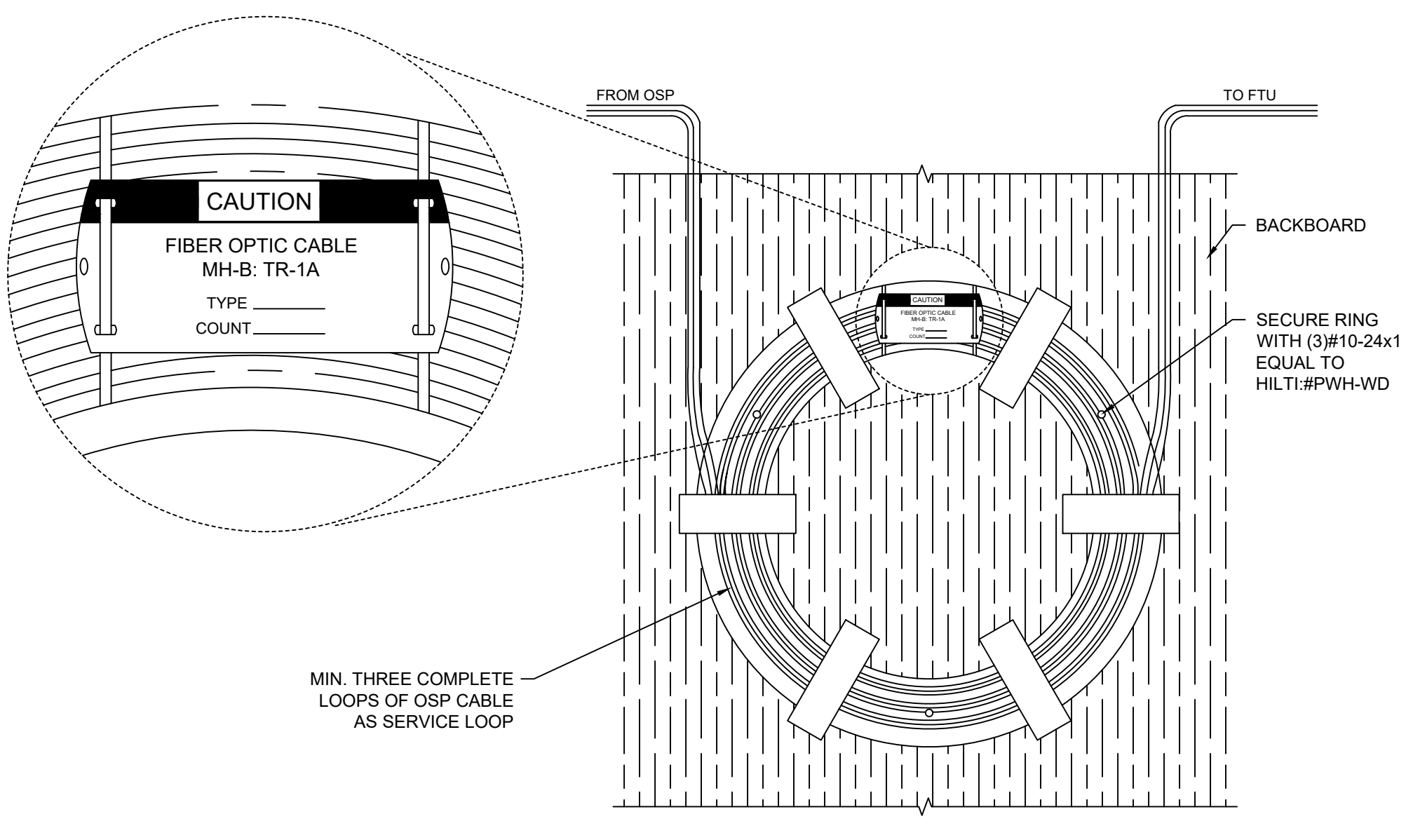
**6 HORIZONTAL LINK IDENTIFIER LABELING FORMAT**  
NOT TO SCALE



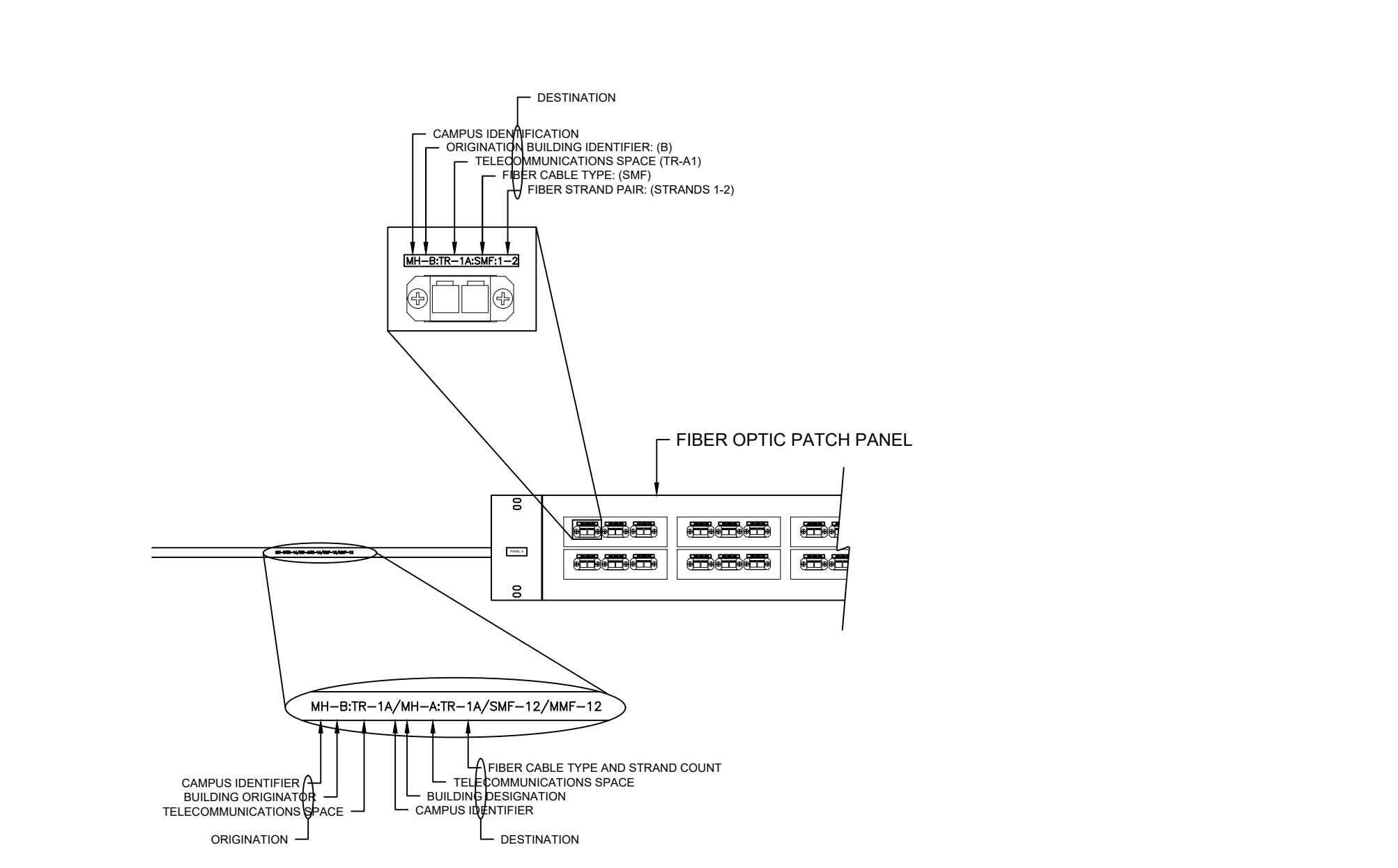
ALL MC AND HC LABELING FORMATS ARE TO MATCH THOSE LISTED IN THE SPECIFICATIONS TYPICAL OF ALL LABELS.

PLACE CAUTION TAG (PANDUIT #PST-FOBLINK) EVERY 36" MINIMUM

**7 PULL BOX/PULL CAN CABLE ADMINISTRATION**  
NOT TO SCALE



**8 OPTICAL FIBER STORAGE RING**  
NOT TO SCALE



**9 OPTICAL FIBER PANEL ADMINISTRATION**  
NOT TO SCALE

**COLLEGE OF THE SEQUIOIAS**  
STRUCTURED CABLING  
COLLEGE OF THE SEQUIOIAS  
VISALIA, CA 93277  
915 S. MOONEY DR.

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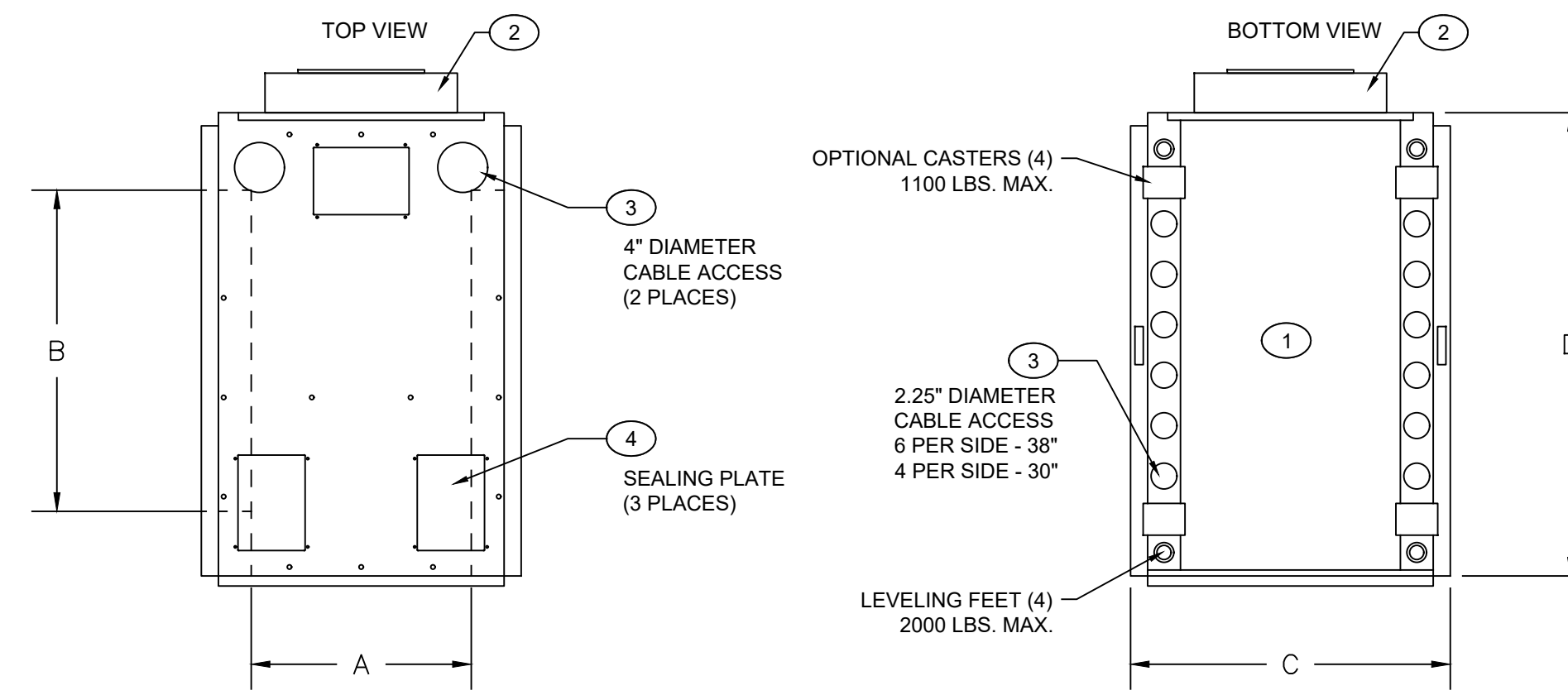


SHEET DESCRIPTION  
INSTALLATION  
DETAILS

SHEET NUMBER  
**T4.2**

ISSUE DATE  
08/19/2019  
PROJECT 0023-18C.1





**A**  
**RACK MOUNTING WIDTH**

EIA NOMINAL	INSIDE DIM
19"	17.8"
23"	22.8"

**B**  
**ADJUSTABLE MOUNTING DEPTH**

BASE	MIN.	MIN.
30"	18.5"	22.5"
38"	26.5"	30.5"

INVERT EACH RAIL IN THE UNIT TO INCREASE THE MAX. BY 4"

**C**  
**FOOTPRINT - WIDTH**

RACK	NO PANELS	WITH PANELS
19"	23.5"	25"
23"	27.5"	29"

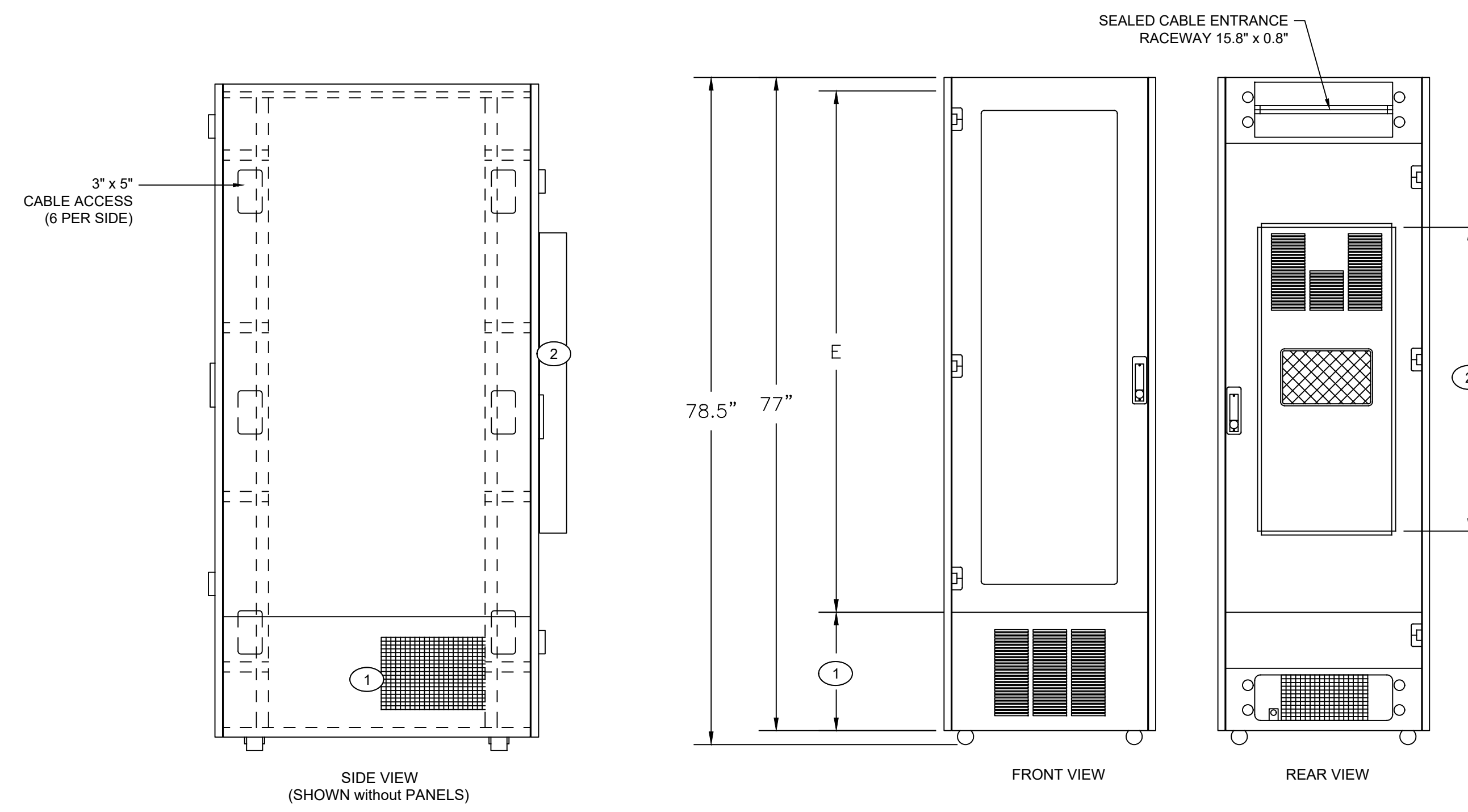
FOR MULTIPLE UNIT SYSTEMS ADD 0.2 CLEARANCE WIDTH BETWEEN FRAMES

**D**  
**FOOTPRINT - DEPTH**

NOMINAL	with DOORS	with BCM
30"	30.2"	33.2"
38"	38.2"	41.2"

**E**  
**USABLE SPACE**  
with NO UPS = 35U  
with GTX2 or PSI UPS = 33U

**UPS REQUIREMENTS - DEDICATED CIRCUIT**  
NEMA 5-15R: GTX2 500-1500, PS700RT-PS1440RT  
NEMA 5-20R: GTX2-2000  
NEMA L5-30R: GTX2-3000, PS2200RT-PS3000RT



- 1 RACK-MOUNT ENVIRONMENTAL CONTROL MODULE (ECM).  
ELECTRICAL REQUIREMENTS:  
DEDICATED 120V, 15A CIRCUIT (NEMA 5-15R)  
CLEARANCE REQUIREMENTS:  
OPERATIONAL: 12" FRONT, REAR, & TOP OF THE ENCLOSURE  
SERVICE: 36" FRONT
- 2 OPTIONAL BACK-UP COOLING MODULE (BCM).  
ELECTRICAL REQUIREMENTS:  
NEMA 5-15R, FACTORY CONNECTED TO OPTIONAL UPS
- 3 OPTIONAL SEALED ENTRANCE CABLE BUNDLE. REQUIRED FOR CABLE ENTRY VIA ROUND HOLES (1.6" or 2.3" INSIDE DIAMETER)
- 4 TOP-MOUNT ECM AIRFLOW ACCESS ONLY. SEALED ON ALL RACK-MOUNT ECM APPLICATIONS.

FRAME CAPACITY  
2000 LBS. MAX.

**1** LIEBERT MCR CABINET DETAIL  
NOT TO SCALE

**COLLEGE OF THE SEQUIOIAS**  
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SHEET DESCRIPTION  
INSTALLATION  
DETAILS

SHEET NUMBER  
**T4.3**

ISSUE DATE  
08/19/2019

PROJECT 0023-18C.1