PROJECT MANUAL

PREPARED FOR THE
TWAIN HARTE SCHOOL
18815 MANZANITA DR. TWAIN HARTE, CA

STRUCTURED CABLING
FOR TWAIN HARTE SCHOOL

A "PUBLIC WORKS" PROJECT

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PROJECT
0045 - 27C.1

POSTING DATE:
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A – NOTICE TO CONTRACTORS CALLING FOR BIDS

Owner:	Twain Harte School
Publish Dates:	November 12, 2026 November 19, 2026
Question Deadline:	December 9, 2026 @ 12:00pm Pacific Time
Bid Due Deadline:	December 14, 2026 @ 12:00pm Pacific Time
Bid Due Location:	All Bids will be received through the project website at https://projects.infinitycomm.com. Bids will not be received in any manner other than digital copies through the project website. All submittals are required to be in PDF format, unless otherwise noted, and must have a file size of less than 10Mb.
Project Name: Project Number:	Structured Cabling for Twain Harte School 0045-27C.1
Plans on File:	https://projects.infinitycomm.com & https://portal.usac.org/suite/

The license classifications required to bid and perform this Project are those identified in the Project-specific Notice Calling for Bids, as determined by the OWNER under Business and Professions Code sections 7058 and 7059 and the applicable classifications in title 16 of the California Code of Regulations.

A Mandatory Pre-Bid Meeting will be conducted on December 3, 2026, at Twain Harte School District Office, located at: 18815 Manzanita Dr., Twain Harte, CA 95383.
This meeting is Mandatory, ALL Contractors attending will be required to sign in at the time of arrival and are also required to stay for the duration of the Pre-Bid Meeting.

All questions concerning this project shall be requested through the project website at https://projects.infinitycomm.com. All requests for information shall be submitted not less than five (5) days prior to the opening of the bid. Any questions submitted after the question deadline will not be answered. All questions will be submitted through the project website. Bidders shall submit only one question submittal. All questions shall be included in the single submittal. DO NOT submit single question submittals. Failure to comply with this requirement may result in the bidder's response being negatively scored or rejected completely for failure to comply with the requirements of the RFP.

Each bid must conform and be responsive to the contract documents.

The projects and services depend on partial funding from the E-Rate program. The OWNER expects each Contractor to make themselves thoroughly familiar with any rules or regulations regarding the E-Rate program. All contracts entered into as a result of these Form 470's will be contingent upon specific funding by the SLD at the percentage rate submitted. The E-Rate discount is the supported share of eligible costs. The OWNER is responsible for the applicable non-discount share and authorized ineligible costs. E-Rate invoicing shall follow the OWNER's selected SPI or BEAR method as stated in the Agreement and reflected in the applicable USAC funding request, including any approved change of method. Work shall begin only after the OWNER's Notice to Proceed and within the service dates permitted for the applicable E-Rate category and funding year. For Category Two non-recurring services, advance installation may begin no earlier than April 1 preceding the July 1 start of the applicable E-Rate funding year; FCC Forms 472 and 474 shall not be certified before that July 1. On the day of the bid the Contractor shall supply their Service Provider Identification Number (SPIN) and must certify that their SPIN is "current".

This project is anticipated to start after April 1, 2027, and is anticipated to have a duration of 120 days. All work shall be completed per the project schedule but no later than the project finish date. Liquidated damages in the amount of $500/day are included in this contract. All work shall be completed per the project schedule but no later than September 30, 2028 unless mutually agreed upon.

The OWNER reserves the right to reject any or all bids and/or waive any irregularities or informalities in any bids or in the bidding process. Each bid package will be awarded separately and independent of one another. The OWNER may, at their option, choose to award the projects to one contractor or any combination of contractors.

The OWNER has determined the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute this contract. These rates are on file at the SCHOOL DISTRICT office located at location. Copies may be obtained upon request. A copy of these rates shall be posted at each jobsite. The schedule of per diem wages is based upon a working day of eight (8) hours. Holiday and overtime work shall be paid at the rates required by the applicable DIR prevailing-wage determination and law, including any rate greater than one and one-half times the basic hourly rate.

> It shall be mandatory upon the contractor to whom the contract is awarded (CONTRACTOR), and upon any subcontractor under him, to pay not less than the said specified rates to all workers employed by them in the execution of the contract. It is the

CONTRACTOR'S responsibility to determine any rate change that may have or will occur during the intervening period between each issuance of written rates by the Director of Industrial Relations. During the Work and pursuant to Labor Code §1771.4(a)(5), the Department of Industrial Relations shall monitor compliance with prevailing wage rate requirements and enforce the Contractor's prevailing wage rate obligations.

The following registration requirements are subject to the exceptions in Labor Code section 1771.1, including its applicable small-project exemption in subdivision (n). Each Bidder must be a DIR Registered Contractor when submitting a Bid Proposal. The Bid Proposal of a Bidder who is not a DIR Registered Contractor when the Bid Proposal is submitted will be rejected for non-responsiveness. All Subcontractors identified in a Bidder's Subcontractors' List must be DIR Registered contractors at the time the Bid Proposal is submitted. The foregoing notwithstanding, a Bid Proposal is not subject to rejection for non-responsiveness for inadvertently listing an unregistered Subcontractor on the Subcontractors List if such Subcontractor(s) complete DIR Registration pursuant to Labor Code §1771.1(c)(1) or (2). Further, a Bid Proposal is not subject to rejection if the Bidder submitting the Bid Proposal inadvertently listed any Subcontractor(s) who is/are not DIR Registered contractors and such Subcontractor(s) do not become DIR Registered pursuant to Labor Code §1771.1(c)(1) or (2), but the Bidder, if awarded the Contract, must request consent of the District to substitute a DIR Registered 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.

Except where an exemption applies under applicable law, this Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The CONTRACTOR and all subcontractors shall comply with applicable prevailing wage laws and regulations.

Where a skilled and trained workforce is required by applicable statute or regulation, or is expressly required by the District in the Project's bid and contract documents pursuant to Public Contract Code section 2600(b), the CONTRACTOR and its subcontractors at every tier shall comply with the applicable requirements of Public Contract Code sections 2600–2603, including required enforceable commitments and monthly compliance reporting. Before issuing the solicitation, the OWNER shall determine whether a skilled and trained workforce is required and, when required, include an affirmative notice of that requirement in all bid documents and construction contracts, identifying the applicable legal basis or the OWNER's election under Public Contract Code section 2600(b). The absence of a Project-specific notice does not relieve any party of obligations imposed by applicable statute or regulation.

No bidder may withdraw his bid for a period of **thirty (30) DAYS** after the date set for the opening of the bids.

Bid security is required and shall accompany the bid in one of the forms listed below. All bids shall be presented under sealed cover and accompanied by one of the following forms of bidder's security: cash, a cashier's check, certified check, or a bidder's bond executed by an admitted surety insurer, made payable to the OWNER. The security shall be in an amount equal to at least 10 percent of the amount bid. A bid shall not be considered unless one of the forms of bidder's security is enclosed with it.

For contracts of $25,000 or more, the CONTRACTOR shall furnish the Payment Bond and separate Faithful Performance Bond required by the Project documents, in the prescribed forms, before execution of the Agreement. Required insurance certificates and endorsements shall also be furnished before execution. The OWNER shall approve the required bonds before work commences. Receipt of a **Notice to Proceed** does not extend these deadlines.

Pursuant to the provisions of the Public Contract Code section 22300, CONTRACTOR may substitute certain securities for any funds withheld by OWNER to ensure their performance under the contract. At the request and expense of CONTRACTOR, securities equivalent to any amount withheld shall be deposited, in accordance with Public Contract Code section 22300, with either OWNER or with a state or federally chartered bank, as the escrow agent, who shall then pay any funds otherwise subject for retention to CONTRACTOR. Upon satisfactory completion of the contract, the securities shall be returned to the CONTRACTOR.

Securities eligible for investment shall include those listed in Government Code section 16430, bank and savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by CONTRACTOR and OWNER. CONTRACTOR shall be the beneficial owner of any securities substituted for funds withheld and shall receive any interest on them. The escrow agreement shall be essentially similar to the one indicated in the General Conditions.

For projects using funds allocated under the Leroy F. Greene School Facilities Act of 1998, and in accordance with Education Code section 17076.12, this district has a participation goal for disabled veteran business enterprises of at least 3 percent per year of the overall dollar amount of funds allocated to the district by the State Allocation Board pursuant to the Leroy F. Greene School Facilities Act of 1998 for construction or modernization and expended each year by the school district. With the request for final payment under such a contract, the contractor shall provide appropriate documentation to the district identifying the amount paid to disabled veteran business enterprises in conjunction with the contract, so that the district can assess its success at meeting this goal. Any withholding for missing documentation shall be limited to amounts and grounds permitted by applicable law, and undisputed amounts shall be paid when due.

B – INFORMATION FOR BIDDERS

READ THIS DOCUMENT CAREFULLY. DO NOT ASSUME THAT IT IS THE SAME AS OTHER SIMILAR DOCUMENTS YOU MAY HAVE SEEN, EVEN IF FROM THE SAME OWNER.

1. **Preparation of Bid Form**. The OWNER invites bids to be submitted at the time and place stated in the Notice Calling for Bids. Bids shall be submitted on the prescribed Bid Form, completed in full. All bid items and statements shall be properly and legibly filled out. Numbers shall be stated both in words and in figures where so indicated, and where there is a conflict in the words and the figures, the words shall govern. The signatures of all persons shall be in longhand. Prices, wording and notations must be in ink or typewritten. Erasures or other changes shall be noted over by signature of the bidder.

NOTE: BID FORM FOR BID IS CONTAINED IN PROJECT MANUAL. BIDDERS INTERESTED IN SUBMITTING A BID SHALL MAKE THEMSELVES KNOWN TO INFINITY COMMUNICATIONS AND COMPLIANCE, INC. SO THAT THEY MAY BE ISSUED ANY ADDENDA.

2. **MULTI-YEAR LICENSES and SERVICES.** Respondents must clearly identify the term length and pricing allocation (annual vs. one-time) for any proposed multi-year licenses, maintenance agreements, support services, or other recurring services. Award of multi-year licenses or services will extend the resulting contract term through the full duration of the license or service commitment. The contract expiration date shall align with the expiration date of the longest-term license or service awarded. This automatic extension applies only to the specific licenses or services with multi-year terms and does not extend unrelated contract obligations beyond their stated duration unless expressly specified. E-Rate classification, cost allocation and reimbursement timing shall follow the Eligible Services List and FCC rules for the applicable funding year and item. Multi-year pricing alone does not determine whether annualized reimbursement is required. Vendors must provide an exhibit with the final contract that identifies the term length, service category, eligible portion, applicable funding year, pricing allocation and whether the charge is recurring or one-time, for each multi-year license or service awarded. USAC BMIC and MIBS services require annual billing in accordance with USAC program requirements. The Respondent is solely responsible for the accuracy of all information provided in their proposal. The District is not responsible for any consequences resulting from incorrect or inaccurate information provided by the Respondent, including E-Rate funding issues or compliance matters. The Respondent shall bear all financial responsibility and liability for any errors or omissions in their submitted information.

3. **Form and Delivery of Bids**. The bid must conform and be responsive to all Project Documents and shall be made on the Bid Form provided, and the complete bid, together with any and all additional materials as required, shall be submitted as described in the **Place of Bid Receipt** as noted on "Notice Calling For Bids," and must be received on or before the time set forth in the Notice Calling for bids for the opening of bids. It is the bidder's sole responsibility to ensure that its bid is received prior to the bid deadline. Late bids will not be accepted. Weather, technology, parcel delivery service, acts of God, or any other delays or excuses for late deliveries will not be accepted.

   In accordance with Government Code Section 53068, any bid received after the scheduled closing time for receipt of bids shall be returned to the bidder unopened. At the time set forth in the Notice Calling for Bids for the opening of bids, the sealed bids will be opened and publicly read aloud at the place indicated in the Notice Calling for Bids. Where prequalification is required under Public Contract Code section 20111.6 or imposed under section 20111.5, only bids meeting the applicable prequalification requirements will be accepted. The solicitation shall state the applicable requirements, covered prime contractors and subcontractors, and prequalification deadlines.

4. **Bid Security**. Bid security is required for this Project. The Payment Bond and Faithful Performance Bond requirements in this paragraph apply to contracts of $25,000 or more. For contracts of less than $25,000, the exemption and applicable-law exception in the Agreement and Bonds paragraph apply. Bid security and insurance requirements are not waived by that exemption. If awarded the contract, the successful bidder will execute the Agreement within **five (5)** working days after award of the contract, and will furnish prior to the execution of the Agreement, on the prescribed forms, a satisfactory Faithful Performance Bond in an amount not less than one hundred percent (100%) of the total bid price and separate Payment (labor and material) Bond in an amount not less than **One-Hundred** percent **(100%)** of the total bid price in accordance with the Project documents and Civil Code Section 9554, and furnish certificates evidencing that the required insurance is in effect in the amounts set forth in the General Conditions. The Faithful Performance Bond shall remain in full force and effect through the guarantee period as specified in the General Conditions. In case of refusal or failure to timely execute the Agreement and furnish the required bonds and insurance certificates, the bid security shall be forfeited to the OWNER. If the Bidder elects to furnish a bid bond as its Bid Security, the Bidder shall use the bid bond form included herein.

5. **Signature**. The Bid Form, the Bid Bond, the Designation of Subcontractors Form, all Information Required of Bidder or prequalification forms, Workers Compensation Certificate, Drug Free Workplace Certification, Noncollusion Declaration, the Agreement, and all Guarantees must be signed in the name of the bidder and must bear the signature of the person or persons duly authorized to sign these documents. Where indicated, if bidder is a corporation, the legal name of the corporation shall first be set forth, together with two signatures: one from among the chairman of the board, president or vice president and one from among the secretary, chief financial

officer, or assistant treasurer. Alternatively, the signature of other authorized officers or agents may be affixed, if duly authorized by the corporation. Such documents shall include the title of such signatories below the signature and shall bear the corporate seal.

If the bidder is a joint venture or partnership, there shall be submitted with the bid certifications signed by authorized officers of each of the parties to the joint venture or partnership, naming the individual who shall be the agent of the joint venture or partnership, who shall sign all necessary documents for the joint venture or partnership and, should the joint venture or partnership be the successful bidder, who shall act in all matters relative to the contract resulting therefrom for the joint venture or partnership. If bidder is an individual, his/her signature shall be placed on such documents.

6. **Modifications**. Changes in or additions to any of the bid documents, summary of the work bid upon, alternative proposals, or any other modifications which are not specifically called for by the OWNER may result in the OWNER'S rejection of the bid as not being responsive. No oral or telephonic modification of any bid will be considered. A bid modification must be received before the bid deadline through the submission method stated in the Notice Calling for Bids. A postmark or transmission attempt does not establish timely receipt.

7. **Erasures, Inconsistent or Illegible Bids**. The bid submitted must not contain any erasures, interlineations, or other corrections unless each such correction creates no inconsistency and is suitably authenticated by the signature(s) of the person(s) signing the bid. In the event of inconsistency between words and figures in the bid, words shall control figures. In the event that OWNER determines that any bid is unintelligible, illegible or ambiguous, the OWNER may reject such bid as not being responsive.

8. **Examination of Site and Project Documents**. At its own expense and prior to submitting its bid, each bidder shall examine all documents relating to the Project; visit the site and determine the local conditions which may in any way affect the performance of the work, including the general prevailing rate of per diem wages and other relevant cost factors; familiarize itself with all Federal, State and local laws, ordinances, rules, regulations and codes affecting the performance of the work, including the cost of permits and licenses required for the work; make such surveys and investigations, including investigation of subsurface or latent physical conditions at the site or where work is to be performed, as it may deem necessary for performance of the work at its bid price ; determine the character, quality, and quantities of the work to be performed and the materials and equipment to be provided; and correlate its observations, investigations, and determinations with all requirements of the Project . The Project documents show and describe the existing conditions as they are believed to have been used in the design of the work and are only provided as information for the bidder. OWNER is not making any warranties regarding said information. The OWNER shall not be liable for any loss sustained by the successful bidder resulting from any variance between the conditions and design data given in the Project documents and the actual conditions revealed during the bidder's pre-bid examination or during the progress of the work. Bidder agrees that the submission of a bid shall be incontrovertible evidence that the bidder has complied with all the requirements of this provision of the Information for Bidders. These examination and acknowledgment provisions do not waive the CONTRACTOR's rights under Article 27 or other nonwaivable law concerning differing site conditions, hazardous waste or design responsibility.

9. **Withdrawal of Bids**. Any bid may be withdrawn, either personally, by written request, or by telegraphic request confirmed in the manner specified above for bid modifications, at any time prior to the scheduled closing time for receipt of bids. The bid security for bids withdrawn prior to the scheduled closing time for receipt of bids, in accordance with this paragraph, shall be returned. No bidder may withdraw any bid for a period **of thirty (30) days** after the date set for the opening of bids.

10. **Agreement and Bonds**. The Agreement to be executed by the successful bidder, as CONTRACTOR, and the required bond forms are included in the Project documents and should be carefully examined by the bidder. For contracts of $25,000 or more, the CONTRACTOR shall furnish a Payment Bond and a separate Faithful Performance Bond, in the forms included in the Project documents, prior to execution of the Agreement. For every contract requiring a Payment Bond under these Project documents, the Payment Bond shall be not less than one hundred percent (100%) of the total amount payable under the contract; Special Conditions may require a greater amount. Any Payment Bond required by Civil Code section 9550 shall comply with Civil Code section 9554, and neither the Special Conditions nor any other Project document shall reduce that bond below the statutory minimum. The **Faithful Performance Bond** shall be in the amount of o**ne** h**undred** p**ercent (100%)** of the contract amount. For contracts of less than $25,000, neither the Payment Bond nor the Faithful Performance Bond is required under these Project documents, except to the extent another applicable law or funding requirement requires a bond. Required certificates of insurance shall be furnished prior to execution of the Agreement regardless of the contract amount. All required bonds shall be approved by the OWNER before work commences.

11. **Interpretation of Project Documents**. If any bidder is in doubt as to the true meaning of any part of the Project documents, or finds discrepancies in, or omissions from the drawings and specifications, a written request for an interpretation or correction thereof may be submitted to the Construction Manager. The bidder submitting the written request shall be responsible for its prompt delivery. Any interpretation or correction of the Project documents will be made only by addendum duly issued by the Construction Manager, and a copy of such addendum will be hand delivered or mailed or faxed by the Construction Manager to each bidder known to have received a set of the Project documents. No person is authorized to make any oral interpretation of any provision in the Project documents, nor shall any oral interpretation be binding on the OWNER. If discrepancies on drawings, or in plans or specifications, or conflicts between

drawings, plans, specifications, terms or conditions exist, the interpretation of the Construction Manager shall prevail. Bidder shall become familiar with the plans, specifications and drawings.

SUBMITTAL OF A BID SHALL BE INCONTROVERTIBLE EVIDENCE THAT THE BIDDER HAS DETERMINED THAT THE PLANS, SPECIFICATIONS AND DRAWINGS ARE SUFFICIENT FOR BIDDING AND COMPLETING THE WORK; THAT BIDDER IS CAPABLE OF READING, FOLLOWING AND COMPLETING THE WORK IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND DRAWINGS; AND THAT THE PLANS, SPECIFICATIONS AND DRAWINGS FALL WITHIN AN ACCEPTABLE STANDARD FOR PLANS, SPECIFICATIONS AND DRAWINGS; AND THAT BIDDER AGREES THAT THE PROJECT CAN AND WILL BE COMPLETED ACCORDING TO THE OWNER'S TIMELINES AND ACCORDING TO THE PROGRESS SCHEDULE. This acknowledgment is subject to Article 27 and other nonwaivable law concerning differing site conditions, hazardous waste and design responsibility.

12. **Bidders Interested In More Than One Bid**. No person, firm or corporation shall be allowed to make, or file, or be interested in more than one bid for the same work unless alternate bids are specifically called for by the OWNER. A person, firm, or corporation that has submitted a sub proposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a proposal or quoting prices to other bidders or submitting a bid on the Project.

13. **Award of Contract**. The OWNER reserves the right to reject any or all bids, or to waive any irregularities or informalities in any bids or in the bidding process. If two identical low bids are received from responsive and responsible bidders, the OWNER will determine which bid will be accepted pursuant to Public Contract Code Section 20117. The award of the contract, if made by the OWNER, will be by action of the governing board and to the lowest responsive and responsible bidder. In the event an award of the contract is made to bidder, and such bidder fails or refuses to execute the Agreement and provide the required documents within five (5) working days after the award of the contract to bidder, the OWNER may award the contract to the next lowest responsive and responsible bidder or release all bidders.

14. **Bid Protest**. If a Respondent wishes to protest the award of any contracts resulting from this RFP, the Respondent must follow the protest procedures as outlined in the Owners Board Procurement Policies.

15. **Alternatives**. Unless the solicitation expressly specifies another method permitted by Public Contract Code section 20103.8, the lowest bid shall be determined by the base bid alone, without consideration of additive or deductive alternates. If the contract is awarded, it shall be awarded to the lowest responsive and responsible bidder determined under the stated method. After that determination, the OWNER may add or deduct the alternates included in the solicitation as permitted by section 20103.8.

16. **Competency of Bidders**. In selecting the lowest responsive and responsible bidder, consideration will be given not only to the financial standing but also to the general competency of the bidder for the performance of the work. By submitting a bid, each bidder agrees that the OWNER, in determining the successful bidder and its eligibility for the award, may consider the bidder's experience and facilities, conduct and performance under other contracts, financial conditions, reputation in the industry, and other factors which could affect the bidder's performance of the project. To this end, successful bidder may be required to submit a statement of the bidder's experience on the form entitled "INFORMATION REQUIRED OF BIDDERS." This form will be issued to bidders as may be required by OWNER.

17. **Service Provider Identification Number**. For a Project seeking E-Rate support, each bidder shall submit, on the form furnished with the Project documents, their Service Provider Identification Number (SPIN) which shall be supplied to SLD during the funding request cycle portion of this project. The Contractor's SPIN number must be valid and active at the time bids are received.

18. **Skilled and Trained Workforce**. The skilled and trained workforce requirements in this section apply only when required by applicable statute or regulation, or expressly required by the District in the Project's bid and contract documents pursuant to Public Contract Code section 2600(b). At bid submission, each bidder shall provide an enforceable commitment that it and all subcontractors at every tier will comply with the applicable skilled-and-trained workforce requirements in Public Contract Code sections 2600–2603. Any additional bid-time documentation shall be specifically identified in the solicitation. At no time shall the awarded contractor be in violation of these laws. During performance, the CONTRACTOR shall document compliance with the applicable graduation percentages through the monthly reports required by Public Contract Code section 2602. Additional evidence required with the bid shall be identified expressly in the solicitation. The applicable occupation-specific percentages, statutory exceptions and permitted monthly headcount or work-hour measurement methods in Public Contract Code section 2601(d) shall govern.

    a) Failure to provide the enforceable commitment or other bid-time workforce documentation expressly required by this solicitation may result in rejection as permitted by applicable law.
    b) The awarded contractor will be required to provide monthly reports to the Owner showing that they have maintained the minimum requirements for skilled journeyman. The monthly report shall include the full name of, and the apprenticeship program name, location and graduation date for, each worker relied upon to meet the apprenticeship-graduation percentage requirements of Public Contract Code section 2601(d)(2).

i) If the required monthly report is missing or incomplete, the OWNER shall withhold further payments until a complete report is supplied, as required by Public Contract Code section 2602(b). If incompleteness results from a subcontractor's failure to supply information, withholding is limited to 150 percent of that subcontractor's monthly billing. If a report shows substantive noncompliance, the OWNER shall withhold 150 percent of the monthly billing of the noncompliant entity or subcontractor under Public Contract Code section 2602(c). Payments, including previously withheld amounts, shall resume upon submission of a plan to achieve substantial compliance before completion, unless the OWNER rejects the plan as insufficient within a reasonable time and explains its reasons. Payments shall also resume upon a qualifying statutory substitution under section 2602(b) or (c).

ii) If a monthly report does not demonstrate compliance, the OWNER shall forward the report to the Labor Commissioner under Public Contract Code section 2602(c), together with any corrective plan and the OWNER's response to that plan.

c) All monthly reports are considered public record and will be available for public inspection.

d) The Labor Commissioner may assess civil penalties under Public Contract Code section 2603 of up to $5,000 per month of work performed in violation and up to $10,000 per month for a second or subsequent violation within a three-year period, subject to the statute's findings, discretion and procedures.

e) For a Project subject to these requirements, the CONTRACTOR shall include a copy of Public Contract Code sections 2600–2603 in its subcontracts, periodically monitor subcontractor compliance, take required corrective action upon learning of noncompliance, and obtain each subcontractor's declaration under penalty of perjury before final payment, as addressed in section 2603(f).

19. **Listing Subcontractors**. Each bidder shall submit, on the form furnished with the Project documents, a list of the proposed Subcontractors on this Project as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100 et seq.). If alternate bids are called for and the bidder intends to use different or additional Subcontractors, a separate list of Subcontractors must be submitted for each such alternate bid.

20. **Workers' Compensation**. In accordance with the provisions of Section 3700 of the Labor Code, the successful bidder shall secure the payment of compensation to all employees. The successful bidder who has been awarded the contract shall sign and file with OWNER the following certificate prior to performing the work: "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract." The form of such certificate is included as a part of the Project documents.

21. **Contractor's License**. If, at the time of the bid opening date and time, bidder is not properly licensed to perform the Project in accordance with Division 3, Chapter 9, of the Business and Professions Code of the State of California and the Notice Calling for Bids, such bid will be rejected as non-responsive except as permitted by applicable law. Pursuant to Business and Professions Code Section 7028.15, unless a statutory exception applies, the OWNER shall verify before award that the bidder was properly licensed when the bid was submitted. Licensing penalties and the consequences of an award to an unlicensed contractor shall be determined under applicable law, including Business and Professions Code section 7028.15. If the license classification specified hereinafter is that of a "specialty contractor" as defined in Section 7058 of the California Business and Professions Code, the OWNER shall not award the prime contract to a specialty contractor whose classification constitutes less than a majority of the Project, as required by Business and Professions Code section 7059(b).
22. **Anti-Discrimination**. The CONTRACTOR and its subcontractors shall comply with all applicable federal and California nondiscrimination laws, including the California Fair Employment and Housing Act and Labor Code section 1735. No listing of protected characteristics in these Project documents limits protections provided by applicable law.

23. **Hold Harmless**. The following indemnity and defense obligations apply only to the extent permitted by Civil Code section 2782. They do not require indemnification for liability that section prohibits transferring, including the public agency's active negligence and the sole-negligence, willful-misconduct and furnished-design liabilities described in subdivision (a). The successful bidder awarded the contract shall indemnify and hold harmless the OWNER, its governing board, officers, agents, and employees from every claim or demand made, and every liability, loss, damage, or expense, of any nature whatsoever, which may be incurred by reason of:

    a) Liability for damages for (1) death or bodily injury to person(s); (2) injury to, loss or theft of property; or (3) any other loss, damage or expense arising under either (1) or (2) above, sustained by the bidder upon or in connection with the work called for in this Project, except for liability resulting from the active negligence, or willful misconduct of the OWNER.

    b) Any injury to or death of any person(s) or damage to, loss or theft of any property caused by any act, omission, neglect, or default of the bidder, or any person, firm, or corporation employed by the bidder CONTRACTOR, either directly or by independent contract, arising out of, or in any way connected with the work covered by this Project, whether said injury or damage occurs either on or off OWNER property, if the liability arose from the negligence or willful misconduct of anyone employed by the bidder, either directly or by independent contract.

c) The bidder, at bidder own expense, cost, and risk shall defend at OWNER'S request, any and all actions, suits, or other proceedings that may be brought or instituted against the OWNER, its governing board, its officers, agents or employees, on any such claim or liability, and shall pay or satisfy any judgment that may be rendered against the OWNER, its governing board, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

24. Substitutions.

a) Should the bidder wish to request prior to bid opening, any substitution for the materials, process, service or equipment specified, the bidder shall submit a written request at least ten (10) days before the bid opening date and hour. If the substituted item is acceptable, the OWNER will approve it in an Addendum issued to all bidders of record. Requests submitted later than this pre-bid deadline may be reviewed under the separate post-award equal-product procedure, but shall not change the bid requirements unless approved by addendum before bidding.

b) With respect to any materials, process, service or equipment listed in the bid, unless the bidder clearly indicates in its bid that it is proposing to use an "equal" product, its bid shall be considered as offering the material, process, service or equipment referred to by the brand name or trade name specified.

The brand name or trade name, if any, of a proposed substitute item shall be inserted in the space provided in the bid or shall be otherwise clearly identified in the bid. The awarding of the contract to a bidder who has indicated in its bid that it is proposing to use an "equal" item shall not constitute an admission by the OWNER of the equality of that item. It is expressly understood and agreed by the bidder that, in so awarding this contract, the OWNER reserves the right to reject any such proposed substituted item. It is further expressly understood and agreed by bidder that in the event the OWNER rejects a proposed "equal" item, the bidder will then supply the material, process, service or equipment designated by brand name or trade name or a substitute therefore which meets with the approval of the OWNER.

c) With respect to all proposed substitutions of "equal" items, the bidder will submit all pertinent and appropriate data substantiating its request for substitutions no later than **thirty-five (35) calendar days after award of the contract.** The OWNER is not responsible for locating or securing any information that is not included in such substantiating data. The burden of proof as to the quality or suitability of proposed substituted items shall be borne by the bidder. The OWNER shall be the sole judge as to the quality and suitability of proposed substituted items, and decisions of the OWNER shall be final and conclusive. Unless extended by the mutual agreement of the parties, the OWNER shall notify the successful bidder of the decision concerning the proposed substitution of "equal" items within thirty (30) calendar days after receipt of complete substantiating data. Also such decisions by the OWNER shall be in writing, and no proposed substituted item shall be deemed approved unless the OWNER has so indicated in writing. These time limitations shall be complied with strictly, and in no case will an extension of time for completion be granted because of the bidder's failure to request the substitution of an item at the times and in the manner set forth herein. Substitution requests and decisions shall comply with Public Contract Code section 3400.**-**

d) A preference for California-manufactured supplies applies only if expressly stated in the solicitation, authorized by applicable law, and consistent with applicable funding requirements. Any preference under Government Code section 4334 shall satisfy each condition of that section.

25. **Presumption of Surety Qualifications**. Bonds shall be executed by an admitted surety insurer authorized to transact surety insurance in California. The OWNER's rating standard remains A.M. Best A:VIII, subject to the approval requirements and alternative qualification procedure in Code of Civil Procedure section 995.660. A rating alone does not replace the required proof of authority and due execution.

26. **DrugFree Workplace Certification**. As a requirement of these Project documents, the successful bidder will be required to execute a DrugFree Workplace Certificate upon execution of the Agreement. The bidder will be required to take positive measures outlined in the certificate in order to insure the presence of a drugfree workplace. Government Code sections 8350 et seq. also apply to the extent the contract or its funding brings it within that law. Any withholding, termination or debarment shall be imposed only under applicable law and lawful contract terms.**-**---

27. **Noncollusion** Declaration. In accordance with the provisions of Section 7106 of the Public Contract Code, each bid must be accompanied by a noncollusion declaration executed under penalty of perjury in the form required by Public Contract Code section 7106.

28. **Escrow Agreement**. Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract. At the request and expense of the successful bidder awarded the contract, securities equivalent to the amount withheld as retention shall be deposited with the OWNER, or with a state or federally chartered bank in California as the escrow agent, who shall then pay such monies to the successful bidder. The OWNER retains the sole discretion to approve the bank selected by the successful bidder to serve as escrow agent. Approval shall be administered consistently with the CONTRACTOR's rights under Public Contract Code section 22300. Upon satisfactory completion of the contract, the securities shall

be returned to the successful bidder. Eligible securities are those described in Public Contract Code section 22300(d). The successful bidder shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

In the alternative, under Section 22300, the successful bidder may request OWNER to make payment of earned retentions directly to the escrow agent at the expense of the successful bidder. Also at the successful bidder's expense, the successful bidder may direct investment of the payments in securities, and the successful bidder shall receive interest earned on such investment upon the same conditions as provided for securities deposited by successful bidder. Upon satisfactory completion of the contract, successful bidder shall receive from the escrow agent all securities, interest and payments received by escrow agent from OWNER pursuant to the terms of Section 22300. The successful bidder shall pay to each Subcontractor, not later than 20 days after receipt of such payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention withheld to insure performance of the successful bidder. Such bidder must complete and execute the Escrow Agreement and submit it to the OWNER.

29. **Change Orders**. All change order requests must be submitted in the form set forth in the Project documents and pursuant to Article 59 of the General Conditions. The amount of allowable charges submitted pursuant to a change order shall be limited to the charges allowed under Article 59 of the General Conditions. Indirect, consequential and incidental costs, project management costs, extended home office and field office overhead, administrative costs and profit and other charges not specifically authorized under Article 59 of the General Conditions will not be allowed.

30. The CONTRACTOR'S Certificate Regarding Non-Asbestos containing materials shall be completed by the successful bidder.

31. It is the intention of the OWNER to sign a contract and issue a Notice to Proceed to the lowest responsible bidder as soon as possible after receipt of bids. The CONTRACTOR shall expedite the furnishing of certificate of insurance, bonds, and any other document required to execute this contract.

32. The Service Provider shall be responsible for timely filing a valid FCC Form 473 (Service Provider Annual Certification, "SPAC") with USAC for each funding year and for all eligible services and/or products provided under this agreement, for the full term of the contract. The Service Provider shall file the SPAC for the applicable funding year before USAC can process invoices requiring that certification. -

    In the event such failure occurs, whether the Owner utilizes the Billed Entity Applicant Reimbursement (BEAR) method or the Service Provider Invoice (SPI) method, and the Owner is denied E-Rate discounts through no fault of its own, the Service Provider shall reimburse the Owner for the full amount of E-Rate discounts that would have otherwise been recoverable. This reimbursement obligation shall include, but not be limited to, unreimbursed eligible costs, penalties, interest, or any repayment obligations incurred by the Owner as a direct result of the Service Provider's noncompliance.

01 – PRIME CONTRACTOR BID FORM

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED WITH BID:

1. BID FORM
2. CONTINGENCY AS A STANDARD PRACTICE
3. ITEMIZED EQUIPMENT LIST
4. SUBSTITUTION LISTING
5. DESIGNATION OF SUBCONTRACTORS
6. NONCOLLUSION DECLARATION
7. EXCLUSION OF ASBESTOS PRODUCTS
8. EXCLUSION OF LEAD PRODUCTS
9. CONTRACTOR'S QUALIFICATIONS QUESTIONNAIRE
10. MANUFACTURES CERTIFICATION
11. CONTRACTORS LICENSE CERTIFICATION
12. CERTIFICATE OF ATTENDANCE AT MANDATORY JOB WALK
13. BID BOND
14. SKILLED AND TRAINED WORKFORCE
15. PRIME CONTRACTOR AGREEMENT

PROJECT: Structured Cabling for Twain Harte School

Pursuant to and in compliance with the Notice to Contractors Calling For Bids and related documents, **the undersigned bidder**, having familiarized himself/herself with the terms of the contract, the local conditions affecting the performance of the contract, the cost of the work at the place where the work is to be done, the Drawings, Specifications, CM Manual, and other Contract Documents, **proposes and agrees to perform**, within the time stipulated, including all of its component parts, and everything required to be performed, and to provide and furnish any and all of the labor, materials, tools, expendable equipment, and all applicable taxes, utility and transportation services necessary to perform the contract and complete in a workmanlike manner all of the work required in connection with the Specifications, Project Drawings and other Contract Documents, including Addendum No.'s _____, _____, _____, _____, _____, _____, _____. Copies of Addenda are obtainable at the office of the owners' representative (Infinity Communications).

BASE BID –Structured Cabling for Twain Harte School:

The Bidder agrees to perform all work noted above, as described in the Project Manual (Contract Documents, Drawings and Specifications), and Schedules for the sum of:

_____ Dollars ($)

(Amount Shall Be Shown In Both Words And Figures. In Case Of A Discrepancy, The Amount Shown In Words Will Govern).

Contingency Fee – If applicable per form 3A:
The Bidder agrees to negotiate in good faith with the Owner on future additional work not to exceed 10% of the Base Bid for the sum of:

_____ Dollars ($)

(Amount Shall Be Shown In Both Words And Figures. In Case Of A Discrepancy, The Amount Shown In Words Will Govern).

The lowest bid shall be determined using the method expressly stated in the Information for Bidders under Public Contract Code section 20103.8. Selection of alternates after ranking shall not change that method.
The bidder agrees that at the time of bid, he/she will provide a signed copy of the owner's **E-rate Contractor's Agreement**.

The successful bidder shall furnish required bonds and insurance before execution of the Agreement, as provided in the Agreement and Bonds paragraph, and obtain required approvals before beginning work. A Notice to Proceed does not extend those deadlines.

The bidder has carefully examined the plans and specifications for this project that were prepared and furnished by the OWNER and acknowledges their sufficiency.

It is understood and agreed that the work under the contract shall be commenced by the bidder, if awarded the contract, on the date to be stated in the OWNER'S **Notice to Proceed** and that the scope of work for this base bid as stated above shall be completed as noted in Article 6 of CM Manual.

FULL NAME OF ALL PARTNERS OR LEGAL NAME OF CORPORATION _____

(Type or Print)

Authorized Contact / Bid preparer / Sales Representative: _____

BUSINESS ADDRESS: _____

(Type or Print)

TELEPHONE: _____ EMAIL: _____

BY: _____ _____

(Signature In Ink) (Type Or Print Name Of Title And Signature)

"I declare, under penalty of perjury, that the information provided and representations made in this bid are true and current and that this declaration was executed on _____ (date) at _____ **COUNTY**, California."

PRESIDENT OF CORPORATION: _____

(Signature In Ink)

_____

(Type Or Print Name And Title Of Signature)

SECRETARY OF CORPORATION: _____

(Signature In Ink)

_____

(Type Or Print Name And Title Of Signature)

CALIFORNIA STATE CONTRACTOR'S LICENSE NO.: _____ FEDERAL I.D. NO: _____

LICENSE EXPIRATION DATE: _____ TYPE OF LICENSE: _____

LICENSE IN THE NAME OF: _____

(Type Or Print Name)

E-RATE SERVICE PROVIDER IDENTIFICATION NUMBER (SPIN) #_____

PUBLIC WORKS CONTRACTOR'S REGISTRATION #_____

DATED: _____ CORPORATE SEAL (if applicable):

02 – CONTINGENCY FEE AS A STANDARD PRACTICE

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

The "Owner" establishes a classification "Contingency Fee"; for adds/moves/changes as affected by the construction/funding schedule, changes to campus environment. This classification applies to all construction work. This classification is not based on permanent physical elements of construction. Rather, the classification items are cost components common to construction, project, and program estimates.

Contingency will not be allowed for increases to labor cost, taxes, surcharges, shipping, and handling.

Bidder agrees that the contingency will be used for adds, moves and changes requested by the owner during the construction process for eligible services only. If the owner does not request adds, moves, or changes the contingency will not be invoiced; the OWNER shall make any required funding-commitment adjustment, and any funds already disbursed shall be returned through the applicable USAC process.

Please fill in one of the following:

YES _____ (company name) **does include** contingency as a standard business practice as defined above. If YES please provide the "Contingency Fee" amount in percentage. Equal to _____ % (not to exceed 10%) of the; base bid amount,

Contingency Amount $ _____ Dollars ($_____)

–OR–

NO _____ (company name) **does not include** contingency as a standard business practice as defined above.

I hereby certify under penalty of the perjury laws of the State of California that the foregoing is true and correct. Executed at _____, California, on _____, 20___.

Firm Name _____

By _____

Signed _____

Printed Name _____

Title _____

03 – ITEMIZED EQUIPMENT ATTACHMENT SHEET

Bidder shall provide itemized pricing for all equipment to be included in this Bid.

An electronic copy will be required at the time of bid.

Bidder shall include a Description, Part Number, Quantity and Price for each relevant item included in their bid. Bidder shall provide the Labor cost as a line item.

Provided by the “Service Provider”

ITEM 21 SUBMISSION REQUIREMENTS

Vendors must complete and submit the provided Item 21 bulk upload spreadsheet template. Separate spreadsheets are required for each service type (Internal Connections, BMIC, and MIBS). Vendors must also identify the E-Rate eligibility percentage for each item (100%, 0%, or mixed). For mixed-eligibility items, vendors must specify the percentage eligible and provide explanatory notes (example: firewall content filtering is ineligible). Bids not submitted in this format may be considered non-responsive.

04 – SUBSTITUTION LISTING

TO BE SUBMITTED BY BIDDER AND SUBMITTED WITH BID

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

TO: Twain Harte School ("OWNER")

1. Pursuant to bidding and contract requirements for the work titled:
   Project: 0045-27C.1 Structured Cabling

The contract sum, proposed by the undersigned on the Bid Form, is for the work as shown on the drawings, described in the specifications, and otherwise defined in the Contract Documents. However, the undersigned proposes the following substitutions for the Owner's consideration. Should the Owner accept any or all of the proposed substitutions, the Bidder agrees to reduce the contract sum by the amount shown. Proposed substitutions must be submitted no later than ten (10) calendar days before the bid opening in order for such request to be reviewed before bidding. Substitutions proposed with the bid shall be listed on this form. Other equal-product requests may be submitted within the common post-award period stated in the Information for Bidders and Article 30.

2. Please complete, attaching additional sheets as necessary:
   Bidder proposes [check one]: _____ no substitutions. _____ the following substitutions:

Specified Product or Material	Drawing Number or Specification Section	Proposed Substitution	Proposed Price Reduction

3. All bids should be calculated and submitted on the assumption that substitution requests will not be approved.

4. Bidder hereby certifies that the requested substitutions are equal or better in all respects to what is specified, unless otherwise noted.

SIGNATURE MUST BE IDENTICAL
TO THAT PROVIDED ON BID FORM

BIDDER: _____

BY: _____

05 – DESIGNATION OF SUBCONTRACTORS

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

In compliance with the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100 et. seq.) and any amendments thereof, each bidder shall set forth below: (a) the name, location of the place of business, California contractor license number, and DIR public works contractor registration number of each subcontractor who will perform work or labor or render service to the bidder (prime contractor) in or about the construction of the work or improvement to be performed under this contract or a subcontractor licensed by the State of California who, under subcontract to the bidder (prime contractor), specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications in an amount in excess of one-half of one percent of the bidder's (prime contractor's) total bid and (b) the portion of the work which will be done by each subcontractor. The bidder (prime contractor) shall list only one subcontractor for each such portion as is defined by the bidder (prime contractor) in this bid.

If a bidder (prime contractor) fails to specify a subcontractor or if a bidder (prime contractor) specifies more than one subcontractor for the same portion of work to be performed under the contract in excess of one-half of one percent of the bidder's (prime contractor's) total bid, bidder shall be deemed to have agreed that bidder is fully qualified to perform that portion, and that bidder alone shall perform that portion.

No bidder (prime contractor) whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontractor to be voluntarily assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent of the bidder's (prime contractor's) total bid as to which the original bid did not designate a subcontractor, except as authorized in the Subletting and Subcontracting Fair Practices Act. Substitution, assignment and performance by another subcontractor shall follow Public Contract Code section 4107, including applicable consent, notice, hearing and change-order provisions. Subletting or subcontracting of any portion of the work in excess of one-half of one percent of the bidder's (prime contractor's) total bid as to which no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, only after a finding reduced to writing as a public record of the District awarding this contract setting forth the facts constituting the emergency or necessity. This written emergency or necessity finding shall comply with Public Contract Code section 4109.

Note: If alternate bids are called for and bidder intends to use different or additional subcontractors on the alternates, a separate list of subcontractors must be provided for each such alternate. Identify additional list of subcontractors by Alternate Bid No.

Type Of Trade, Labor, Or Service	Name of Subcontractor; California Contractor License Number; DIR Public Works Contractor Registration Number; License Expiration Date (if requested)	Location & Place Of Business

Type Of Trade, Labor, Or Service	Name & License No. Of Subcontract, License Expiration Date:	Location & Place Of Business

Dated: _____

Name Of Bidder: _____
(Type Or Print Name)

_____
(Signature Of Bidder)

Address: _____

0045-27C.1
(Project No.)

Telephone: _____

_____
(Category)

06 – NONCOLLUSION DECLARATION TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

(Public Contract Code Section 7106)

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

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

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

(Signature Of Bidder)

07 – EXCLUSION OF ASBESTOS PRODUCTS

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

The Contractor agrees that asbestos containing 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. That no asbestos containing products or materials were used in performing work under the Agreement.

2. If CONTRACTOR installs asbestos-containing products in violation of this certification, CONTRACTOR shall replace those products and affected related materials at its expense. Existing or newly discovered suspect materials shall be handled under the applicable hazardous-material procedures and lawful contract allocation.

3. That should the replacement require any interruption in the normal operation of the school, the CONTRACTOR will pay all costs necessarily incurred to keep the school functioning with the least possible disruption to its day-to-day operations.

Executed at _____, California, on _____, 20____.

Firm Name _____

By _____

Signed _____
[Signature must match that on bid]

08 – EXCLUSION OF LEAD PRODUCTS
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

Pursuant to Education Code section 32244 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. That no sources or potential sources of lead contamination were used in performing work under the Agreement.

2. That should any sources or potential sources of lead contamination be found to have been used by the 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. That should the replacement require any interruption in the normal operation of the school, the Contractor will pay all costs necessarily incurred to keep the school functioning with the least possible disruption to its day-to-day operations.

Executed at _____, California, on _____, 20____.

Contractor Name _____

By _____

Signed _____
[Signature must match that on bid]

09 – CONTRACTOR'S QUALIFICATION FORM

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

The prospective Bidder shall furnish all the following information accurately and completely. Failure to fully and completely comply with this requirement may result in rejection of any bid submitted. Additional sheets may be attached if necessary. You" or "your" as used in this questionnaire refers to the Bidder's firm and any of its owners, officers, directors, shareholders, parties, or principals. Owner has discretion to request additional information depending on the project.

—WARNING—

Certain information may lead to a determination of non-responsibility and rejection of the bid.

1. **Firm name and address:** _____
   _____
   _____

2. Telephone: _____

3. **Type of firm:** (check one) Individual ____ Partnership ____ Corp. _____

4. Names and titles of all principals of the firm:

   _____ _____
   _____ _____
   _____ _____

5. **Number of years as contractor.** Include only years in this type of construction and only the years with the current entity in its current form: _____ Years

6. Years of experience your firm has in public school construction work:

   As prime contractor: _____ As subcontractor: _____

7. **In the last five years has your firm or any of its principals defaulted so as to cause a loss to a surety?** Response must include information pertaining to principals' associations outside of the firm bidding this Project. If the answer is yes, give date, name, and address of surety and details.

   _____

   _____

   _____

8. **In the last five years have you or any of your principals been assessed liquidated damages for any project?** Response must include information pertaining to principals' associations outside of the firm bidding this Project. If yes, explain:

_____

_____

_____

9. In the last five years have you or any of your principals been in litigation or arbitration or a dispute of any kind on a question or questions relating to a public construction project and/or an E-rate project? Response must include information pertaining to principals' association outside of the firm bidding this Project. If yes, provide name of public agency and details of the dispute. Attach additional pages as necessary.

_____

_____

_____

10. In the last five years have you or any of your principals ever failed to complete a project? Response must include information pertaining to principals' association outside of the firm bidding this Project. If yes, provide owner's name and details. Attach additional pages as necessary.

_____

_____

_____

11. Safety:

A. Does your firm have a written Safety Program?
Yes _____ No _____

B. Does your firm have personnel permanently assigned to safety?
Yes _____ No _____

12. List of References: Provide information on at least one (3) project your company has completed in the last five years of equal size and scope of this project. Contractor may include additional documentation.

Project 1

Project Name: _____

Contact Information:
Address: _____
_____
_____
Phone Number: _____
Contact Person:
Name: _____
Title: _____
Phone #: _____

Description of Project: _____
_____
_____
_____
_____

Project Start Date: _____

Project Completion Date: _____

Contract amount: _____

Architect/Engineer:
Firm Name: _____
Contact Person:
Name: _____
Title: _____
Phone #: _____

Project 2

Project Name: _____

Contact Information:
Address: _____
_____
_____
Phone Number: _____
Contact Person:
Name: _____
Title: _____
Phone #: _____

Description of Project: _____
_____
_____
_____
_____

Project Start Date: _____

Project Completion Date: _____

Contract amount: _____

Architect/Engineer:
Firm Name: _____
Contact Person:
Name: _____
Title: _____
Phone #: _____

Project 3

Project Name: _____

Contact Information:
Address: _____
_____
_____
Phone Number: _____
Contact Person:
Name: _____
Title: _____
Phone #: _____

Description of Project: _____
_____
_____
_____
_____

Project Start Date: _____

Project Completion Date: _____

Contract amount: _____

Architect/Engineer:
Firm Name: _____
Contact Person:
Name: _____
Title: _____
Phone #: _____

10 – MANUFACTURER'S CERTIFICATION FORM

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

Please provide the following information concerning any Manufacturer's Certifications that apply to the material and scope as defined in the Project Specifications and Bid Drawings for the Structured Cabling 2027 E-rate Project for the Twain Harte School.

Certification #1
Name of Manufacture _____

Certification Expiration Date _____

Certification #2
Name of Manufacture _____

Certification Expiration Date _____

Certification #3
Name of Manufacture _____

Certification Expiration Date _____

*****Bidder must attach a copy(ies) of the company's Manufacture' s Certification(s) behind this sheet.*****

11 – CONTRACTORS LICENSE CERTIFICATION FORM

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

Please provide the following information concerning the Contractor License being used for the Structured Cabling **2027** E-rate Project for the Twain Harte School**.**

California State
Contractor's License No. _____

Type of License _____

License Expiration Date _____

Public Works Contractor's Registration No**.** _____

*****Bidders must attach a copy of the Contractor License for the entity listed above behind this sheet.*****

12 – CERTIFICATE OF ATTENDANCE AT MANDATORY JOB WALK

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

On projects including a mandatory job walk, this form must be submitted with the bid or bidder will be declared "non-responsive"

It is the Owner's intention to provide all contractors with equal access to information regarding this project. Further, the Owner has issued plans and specifications to bidders and has allowed bidders the opportunity to inspect the site with knowledgeable personnel at the job walk. Therefore it is understood that the Owner may declare the bid non-responsive for any of the following conditions:

1. If a bidder attends the entire mandatory job walk but fails to verify they attended the mandatory job walk;

2. If a bidder attends the mandatory job walk but fails to stay the entire duration of the walk;

3. If a bidder fails to attend the mandatory job walk but certifies that he was in attendance. ***[NOTE: This may also lead to a determination that the bidder is non-responsive.]***

Please check one of the following:

___ I attended the mandatory job walk
–OR–
___ I did not attend the mandatory job walk.

Name of attendee who represented your firm: _____
This name will be verified with the "Job Walk Sign in Sheet" from the Pre-Bid Meeting conducted on **December 3, 2026 at 3:00PM** at Twain Harte School Office, located at: 18815 Manzanita Dr., Twain Harte, CA 95383.

I hereby certify under penalty of the perjury laws of the State of California that the foregoing is true and correct. Executed at _____, California, on _____, 20 __.

Firm Name _____

By _____

Signed _____

Printed Name _____

Title _____

13 – BID BOND

IF USED BY BIDDER, MUST BE COMPLETED AND SUBMITTED WITH BID

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

KNOW ALL MEN BY THESE PRESENTS, that we, _____ as Principal, and _____. Surety, are held and firmly bound unto the _____ (referred to as Owner) in the sum of **Ten percent (10%)** of the total amount of the bid of the Principal submitted to the Owner for the work and obligations described below for the payment of which sum in lawful money of the United States, well and truly to be made, we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of this obligation is such that whereas the Principal has submitted the accompanying bid dated _____, 20____, for:

NOW, THEREFORE, if the Principal shall not withdraw said bid within the period specified therein after the opening of the same, or if no period be specified, within 90 days after said opening; and if the Principal is awarded the contract, and shall within the specified period, or if no period is specified, within five working days after the award of the contract, enter into a written contract with the Owner in accordance with the bid as accepted and give bonds with good and sufficient surety or sureties as may be required for the faithful performance and proper fulfillment of such contract and for the payment of labor and materials used for the performance of the contract, provide certificates evidencing the required insurance is in effect (in the amounts required in the contract documents), and provide any other documents required under the contract documents to be submitted at the time the contract is executed, then the above obligation shall be void and of no effect, otherwise to remain in full force and effect.

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

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

IN WITNESS WHEREOF, the parties have executed this instrument under their several seals this _____ day of _____, 20____, the name and corporate party being hereto affixed and duly signed by its undersigned authorized representative.

DATED: _____ PRINCIPAL

By _____

Title _____

DATED: _____ SURETY

By _____

Title _____

Note: Signatures of those executing for the Surety must be properly acknowledged.
All bids shall be presented under sealed cover and accompanied by one of the following forms of bidder's security: cash, a cashier's check, certified check, or a bidder's bond executed by an admitted surety insurer, made payable to the OWNER. The security shall be in an amount equal to at least 10 percent of the amount bid. A bid shall not be considered unless one of the forms of bidder's security is enclosed with it.

14 – SKILLED AND TRAINED WORKFORCE

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

I certify that I will comply with all applicable public-works requirements concerning wages, benefits, payroll records, and apprentice and trainee employment. The skilled and trained workforce reporting provisions of this certification apply only when required by applicable statute or regulation, or expressly required by the District in the Project's bid and contract documents pursuant to Public Contract Code section 2600(b). The monthly report shall include the full name of, and the apprenticeship program name, location and graduation date for, each worker relied upon to meet the apprenticeship-graduation percentage requirements of Public Contract Code section 2601(d)(2).

Where a skilled and trained workforce is required by applicable statute or regulation, or expressly required by the District in the Project's bid and contract documents pursuant to Public Contract Code section 2600(b), the bidder makes an enforceable commitment that it and all subcontractors at every tier will comply with the applicable requirements of Public Contract Code sections 2600–2603. During performance of a Project subject to that requirement, the CONTRACTOR shall submit the monthly compliance reports required by section 2602.

CONTRACTOR:

_____
(Company Name)

_____
(Signature)

_____
(Print Name & Title)

Date: _____

Project Number: 0045-27C.1

Wage Category: _____

15 – PRIME CONTRACTOR AGREEMENT

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

THIS AGREEMENT, in the County of Tuolumne, State of California, is by and between Twain Harte School, (hereinafter referred to as "OWNER"), and _____ _____, (hereinafter referred to as "CONTRACTOR") for the project known as **0045-27C.1 –Structured Cabling**

The OWNER and the CONTRACTOR, for the consideration stated herein, agree as follows:

The complete contract includes all of the Project documents, including the Notice Calling For Bids, Information for Bidders, Bid Form, Designation of Subcontractors, Workers' Compensation Certificate, Faithful Performance Bond, Payment Bond, Change Orders, Shop Drawing Transmittals, Information Required of Bidder, if any, Noncollusion Declaration, Insurance Certificates, Guarantees, Contractor's Certificate Regarding Non-Asbestos Containing Materials, if any, General Conditions, Supplemental General Conditions, Special Conditions, if any, Plans, Drawings, Specifications, this Agreement, and all modifications, addenda and amendments thereto, by this reference incorporated herein. The Project documents are complementary, and what is called for by anyone shall be as binding as if called for by all.

CONTRACTOR shall perform within the time set forth in Paragraph 4 of this Agreement everything required to be performed, and shall provide and furnish all the labor, materials, necessary tools, expendable equipment, and all utility and transportation services as described in the complete contract and required for construction of:

Structured Cabling for Twain Harte School

All of said work to be performed and materials to be furnished should be completed in a good workmanlike manner in strict accordance with the plans, drawings, specifications and all provisions of the complete contract as hereinabove defined. The CONTRACTOR shall be liable to the OWNER for any damages arising as a result of a failure to fully comply with this obligation, and the CONTRACTOR shall not be excused with respect to any failure to so comply by any act or omission of the Engineer or representative of any of them, unless such act or omission actually prevents the CONTRACTOR from fully complying with the requirements of the Project documents, and unless the CONTRACTOR protests at the time of such alleged prevention that the act or omission is preventing the CONTRACTOR from fully complying with the Project documents. Such protest shall not be effective unless reduced to writing and filed with the OWNER within **three (3)** working days of the date of occurrence of the act or omission preventing the CONTRACTOR from fully complying with the Project documents.

OWNER shall pay to the CONTRACTOR, as full consideration for the faithful performance of the contract, subject to any additions or deductions as provided in the Project documents,

Total sum of Base Bid

_____ Dollars ($_____).

Contingency Fee if applicable

_____ Dollars ($_____).

CONTRACTOR LEAVE BLANK TO BE FILLED IN BY THE OWNER
Total sum of Base Bid + Contingency

_____ Dollars ($_____).

This contract may be rendered null and void if the OWNER does not receive it's E-rate funding and/or the if the funding percentage is not at the percentage originally estimated.

Service Provider Invoice Method:
If the OWNER selects the SPI method, CONTRACTOR shall invoice USAC for authorized eligible discounts and invoice the OWNER for its non-discounted share and ineligible charges. The OWNER may instead select the BEAR method described below. Each invoice shall comply with applicable program requirements.

Direct and/or BEAR Reimbursement:
If the OWNER selects the BEAR method, CONTRACTOR shall invoice the OWNER for the full authorized charges. After receiving and paying for eligible equipment and services, the OWNER may request reimbursement directly from USAC, subject to program requirements. CONTRACTOR shall provide supporting records and maintain the required annual SPAC certification.
This contract may be extended if mutually agreed on by both parties in writing for a maximum of one year for each occurrence.
Contract expiration: September 30, 2028

MULTI-YEAR LICENSES and SERVICES;
The contract term shall extend through the full duration of any multi-year software licenses, maintenance agreements, support services, or other recurring services awarded herein. The contract expiration date shall align with the expiration date of the longest-term license or service commitment. This extension applies only to the specifically awarded multi-year licenses or services and does not extend construction completion, unrelated work, or other obligations beyond their stated duration unless expressly agreed in writing.

E-Rate classification, cost allocation and reimbursement timing shall follow the Eligible Services List and FCC rules for the applicable funding year and item. Multi-year pricing alone does not determine whether annualized reimbursement is required. The Vendor shall provide an exhibit to this Agreement [Exhibit ___: Multi-Year License and Service Schedule] that identifies the term length, service category, eligible portion, applicable funding year, pricing allocation and whether the charge is recurring or one-time, for each multi-year license or service awarded. USAC BMIC and MIBS services shall be billed annually in accordance with USAC program requirements.
The Vendor is solely responsible for the accuracy of all information provided in their proposal and in the Multi-Year License and Service Schedule exhibit. The District is not responsible for any consequences resulting from incorrect or inaccurate information provided by the Vendor, including E-Rate funding issues or compliance matters. The Vendor shall bear all financial responsibility and liability for any errors or omissions in their submitted information.

Bidder agrees that the contingency will be used for adds, moves and changes requested by the owner during the construction process FOR eligible services only. If the owner does not request adds, moves, or changes the contingency allotment will be given back to the E-rate program.

Before sending invoices to USAC for the E-rate part of this project, the CONTRACTOR agrees to send all invoices to the OWNER for their approval. The OWNER shall review proposed USAC invoices against the approved funding request, eligible service period, actual delivery, installation or service performance, selected payment method and other applicable program requirements before approval. Delivery of equipment to the site alone does not establish invoice eligibility.
The work shall commence after receiving the OWNER'S **Notice to Proceed** and shall be completed as noted by the date specified in the Notice to Proceed. Time is of the essence. Work is to be completed as noted in the Letter to Proceed. Project duration shall be 120 calendar days. Agreement term may be extended if mutually agreed on by both parties in writing.

In accordance with Government Code Section 53069.85, for each calendar day completion is delayed beyond the time allowed (see Article 6 of CM Manual), CONTRACTOR agrees to forfeit and pay to OWNER the sum of **Five Hundred Dollars and No Cents ($500.00**) per calendar day, which shall be deducted from any payments due to or to become due to CONTRACTOR. Time extensions may be granted by the OWNER as provided in the General Conditions.

In the event said CONTRACTOR fails to furnish tools, equipment, or labor in the necessary quantity or quality, or fails to prosecute the work or any part thereof contemplated by this Agreement in a diligent and workmanlike manner, the Superintendent or designee shall so certify to the Governing Board of the OWNER, and if the CONTRACTOR for a period of ten (10) calendar days after receipt of written demand from OWNER to do so, fails to furnish tools, equipment, or labor in the necessary quantity or quality, and to prosecute said work and all parts thereof in a diligent and workmanlike manner, or after commencing to do so within said ten (10) calendar days, fails to continue to do so, then the OWNER may exclude the CONTRACTOR from the premises, or any portion thereof, and take possession of said premises or any portion thereof, together with all material and equipment thereon, and may complete the work contemplated by this Agreement or any portion of said work, either by furnishing the tools, equipment, labor or material necessary, or by letting the unfinished portion of said work, or the portion taken over by the OWNER to another contractor, or by a combination of such methods. In any event, the procuring of the completion of said work, or the portion thereof taken over by the OWNER, shall be a charge against the CONTRACTOR, and may be deducted from any money due or becoming due CONTRACTOR from the OWNER, or the CONTRACTOR shall pay the OWNER the amount of said charge, or the portion thereof unsatisfied. The sureties provided for under this Agreement shall become liable for payment should CONTRACTOR fail to pay in full any said cost incurred by the OWNER.

The following indemnity and defense obligations apply only to the extent permitted by Civil Code section 2782. They do not require indemnification for liability that section prohibits transferring, including the public agency's active negligence and the sole-negligence, willful-misconduct and furnished-design liabilities described in subdivision (a). The CONTRACTOR agrees to and does hereby indemnify and hold harmless the SCHOOL DISTRICT, the OWNER, its governing board, officers, agents, employees, and CONSULTANT(S), from every claim or demand made, and every liability, loss, damage, or expense, of any nature whatsoever, which may be incurred by reason of:

(a) Liability for damages for (1) death or bodily injury to persons; (2) injury to, loss or theft of property; or (3) any other loss, damage or expense arising under either (1) or (2) above, sustained by the CONTRACTOR upon or in connection with the work called for in this Project, except for liability resulting from the active negligence, or willful misconduct of the OWNER.

(b) Any injury to or death of any person(s) or damage, loss or theft of any property caused by any act, neglect, default or omission of the CONTRACTOR, or any person, firm, or corporation employed by the CONTRACTOR, either directly or by independent contract, arising out of, or in any way connected with the work covered by this Agreement, whether said injury or damage occurs either on or off Owner's property, if the liability arose from the negligence or willful misconduct of anyone employed by the CONTRACTOR, either directly or by independent contract.

The CONTRACTOR, at CONTRACTOR'S own expense, cost, and risk shall defend any and all actions, suits, or other proceedings that may be brought or instituted against the SCHOOL DISTRICT, the OWNER, its governing board, officers, agents or employees, and CONSULTANT(S), on any such claim, demand or liability, and shall pay or satisfy any judgment that may be rendered against the OWNER, its governing board, officers, agents or employees in any action, suit or other proceedings as a result thereof.

CONTRACTOR shall take out, prior to commencing the work, and maintain, during the life of this contract, and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain:

Comprehensive General Liability Insurance

For injuries including accidental death, to any one person in an amount not less than **$1,000,000.00**

And

Subject to the same limit for each person on account of one accident, in an amount not less than **$1,000,000.00**

And

Property Damage Insurance in an amount not less than **$1,000,000.00**

NOTE: the School District, Their Agents, Employees, and Consultants, Shall Be Listed As Additional Insured. CONTRACTOR Shall Submit Six *Original* Certificates To the OWNER

Course of Construction Insurance **By Owner**

Note: The Owner's Course of Construction Insurance will cover only items incorporated into the improvements or materials suitably stored on-site.

Insurance Covering Special Hazards: The following special hazards shall be covered by rider or riders to above-mentioned Comprehensive General Liability insurance or property damage insurance policy or policies of insurance, or by special policies of insurance in amounts as follows:

Automotive and truck, where operated in amounts as above

Material hoist, where used in amounts as above

Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract. At the request and expense of the CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the public agency, or with a state or federally chartered bank in California as the escrow agent, who shall then pay such monies to the CONTRACTOR. The District retains the sole discretion to approve the bank selected by the CONTRACTOR to serve as escrow agent. Approval shall be administered consistently with the CONTRACTOR's rights under Public Contract Code section 22300. Upon satisfactory completion of the contract, the securities shall be returned to the CONTRACTOR. Eligible securities are those described in Public Contract Code section 22300(d). The CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

In the alternative, under Section 22300, the CONTRACTOR may request OWNER to make payment of earned retentions directly to the escrow agent at the expense of the CONTRACTOR. Also at the CONTRACTOR'S expense, the CONTRACTOR may direct investment of the payments in securities, and the CONTRACTOR shall receive interest earned on such investment upon the same conditions as provided for securities deposited by CONTRACTOR. Upon satisfactory completion of the contract, CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by escrow agent from OWNER pursuant to the terms of Section 22300. CONTRACTOR shall pay to each subcontractor, not later than 20 days after receipt of such payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to insure performance of the CONTRACTOR.

If CONTRACTOR is a corporation, the undersigned hereby represents and warrants that the corporation is duly incorporated and in good standing in the State of _____, and that _____, whose title is _____, is authorized to act for and bind the corporation.

Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to be inserted herein and the Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not currently inserted, then upon application of either party the Agreement shall forthwith be physically amended to make such insertion or correction.

The complete contract, as set forth in Paragraph 1 of this Agreement, constitutes the entire Agreement of the parties. No other agreements, oral or written, pertaining to the work to be performed, exists between the parties. This Agreement can be modified only by an amendment in writing, signed by both parties and pursuant to action of the Governing Board.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed.

OWNER:	CONTRACTOR:
By: Twain Harte School	By: _____
_____ Signature	_____ Signature
_____ Date	_____ Date
_____ Print Name	_____ Print Name
_____ Title	_____ Title
_____ Date	_____ Expires: _____ Contractor's License Number
	_____ Public Works Contractor's Registration No
	_____ Tax ID/Social Security Number (CORPORATE SEAL IF CONTRACTOR IS INCORPORATED)

16 – PAYMENT BOND

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Twain Harte School ("hereinafter referred to as Owner"), has awarded to _____, hereinafter referred to as the "Contractor/Principal" a contract for the work described as follows:

Structured Cabling for Twain Harte School

WHEREAS, said Contractor/Principal is required by the Project documents and, when applicable, by Division 4, Part 6, Title 3, Chapter 5 (commencing at Section 9550) of the California Civil Code to furnish a bond in connection with said contract;

NOW, THEREFORE, we, the Contractor/Principal and _____ as Surety, are held firmly bound unto the Twain Harte School (Owner) in the penal sum of _____Dollars ($_____), lawful money of the United States of America for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Contractor/Principal, his/her or its heirs, executors, administrators, successors, or assigns, or a subcontractor, shall fail to pay any person or persons authorized under Civil Code section 9100 to assert a claim against a payment bond or fail to pay for any materials, or other supplies, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code, with respect to work or labor thereon of any kind, or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Section 13020 of the Unemployment Insurance Code with respect to work and labor thereon of any kind, then said Surety will pay for the same, in or to an amount not exceeding the amount hereinabove set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney's fees as shall be fixed by the court, awarded and taxed as provided in Civil Code section 9554.

This bond shall inure to the benefit of any of the persons authorized under Civil Code section 9100 to assert a claim against a payment bond, so as to give a right of action to such person or their assigns in any suit brought upon this bond.

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

Any claims under this bond may be addressed to:

_____ (Name and Address of Surety)

_____

_____ (Name and Address of Agent or representative in California)

_____ (if different from above)

_____ (Telephone and Fax number of Surety, or agent or representative in California)

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

_____
CONTRACTOR/PRINCIPAL (Seal)

By: _____
Signature

_____
Print Name and Title

By: _____
Signature

_____
Print Name and Title

SEAL AND NOTARIAL
ACKNOWLEDGEMENT OF SURETY:

_____

_____

_____
Mailing Address of Surety

_____
Telephone and Fax No. of Surety

0045-27C.1
Project Number: #

17 – FAITHFUL PERFORMANCE BOND

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Twain Harte School (hereinafter referred to as "OWNER"), awarded to_____ (hereinafter referred to as the "Contractor/Principal") the contract for the work described as follows:

Structured Cabling for Twain Harte School

WHEREAS, said Contractor/Principal is required under the terms of said contract to furnish a bond for the faithful performance of said contract which contract is incorporated herein by reference;

NOW, THEREFORE, we the undersigned Contractor, as Principal, and Surety are held and firmly bound to the OWNER in the sum of _____ Dollars ($_____) (this amount being not less than one hundred percent [100%] of the total amount payable by the OWNER under the terms of the contract awarded by the OWNER to the Contractor/Principal), lawful money of the United States of America, for payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bonded Contractor/Principal, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions, and agreements in the said contract and any alteration thereof, made as therein provided, including, but not limited to, the provisions regarding contract duration and liquidated damages, all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the contract, the above obligation shall hold good for a period of **One (1)** year after the acceptance of the work by OWNER, during which time if Contractor/Principal shall fail to make full, complete, and satisfactory repair and replacements and totally protect the OWNER from loss or damage made evident during the period of **One (1) year(s)* (UNLESS OTHERWISE SPECIFIED)** from the date of completion of the work, and resulting from or caused by defective materials or faulty workmanship, the above obligation in penal sum thereof shall remain in full force and effect. The obligation of Surety hereunder shall continue so long as any obligation of Contractor remains.

Whenever Contractor/Principal shall be, and is declared by the OWNER to be, in default under the contract, the OWNER having performed the OWNER's obligations thereunder, the Surety shall promptly remedy the default, or shall promptly:

1. Complete the contract in accordance with its terms and conditions; or

2. Obtain a bid or bids for completing the contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a contract between such bidder and the OWNER, and make available as work progresses sufficient funds to pay the cost of completion less the balance of the contract price, but not exceeding, including other costs and damages for which Surety may be liable hereunder, the amount set forth above. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor/Principal by the OWNER under the contract and any modifications thereto, less the amount previously properly paid by the OWNER to the Contractor/Principal.

Surety expressly agrees that the OWNER may reject any contractor or subcontractor, which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal.

Surety shall not utilize Contractor/Principal in completing the contract nor shall Surety accept a bid from Contractor/Principal for completion of the work if the OWNER, when declaring the Contractor/Principal in default, notifies Surety of the OWNER's objection to Contractor's/Principal's further participation in the completion of the work.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the successors or assigns of the OWNER. Any suit under this bond must be instituted within the applicable statute of limitations period.

FURTHER, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alternation or modification of the Project documents, or of the work to be performed thereunder, shall in any way affect its obligations on this bond; and it does hereby waive notice of any change, extension of time, alteration or modification of the Project documents or of work to be performed thereunder.

Contractor/Principal and Surety agree that if the OWNER is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay OWNER's reasonable attorney's fees incurred, with or without suit, in addition to the above amount.

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

_____
CONTRACTOR/PRINCIPAL (Seal)

By: _____
Signature

_____
Print Name and Title

_____
SURETY

By: _____
Signature

_____
Print Name and Title

SEAL AND NOTARIAL
ACKNOWLEDGEMENT OF SURETY:

_____
Mailing Address of Surety

_____
Telephone and Fax No. of Surety

0045-27C.1
_____
Project Number

18 – ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

This Escrow Agreement is made and entered into, as of _____, 20_____, by and between Twain Harte School, whose address is 18815 Manzanita Dr.**, Twain Harte, CA 95383**, hereinafter called "OWNER;" _____whose address is _____, hereinafter called "Contractor;" and, _____ _____, whose address is _____, hereinafter called "Escrow Agent."

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

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by OWNER pursuant to the Agreement entered into between the OWNER and Contractor for _____ in the amount of _____ dated _____, hereinafter referred to as the "Agreement"). Alternatively, on written request of the Contractor, the OWNER shall make payments of the retention earnings directly to the Escrow Agent. When Contractor deposits the securities as a substitute for retention earnings, the Escrow Agent shall notify the OWNER within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Agreement between the OWNER and Contractor. Securities shall be held in the name of _____, and shall designate the Contractor as the beneficial owner.

(2) The OWNER shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the OWNER makes payments of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until the time the escrow created under this Escrow Agreement is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the OWNER pays the Escrow Agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the OWNER. The OWNER, Contractor and Escrow Agent shall determine these expenses and payment terms.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the OWNER.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the OWNER to the Escrow Agent that OWNER consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The OWNER shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days' written notice to the Escrow Agent from the OWNER of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the OWNER.

(8) Upon receipt of written notification from the OWNER certifying that the Agreement is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Agreement, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the OWNER and the Contractor pursuant to Sections (5) to (8), inclusive, of this Escrow Agreement and the OWNER and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the OWNER and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

ON BEHALF OF OWNER	ON BEHALF OF CONTRACTOR	ON BEHALF OF ESCROW AGENT
Title	Title	Title
Name	Name	Name
Signature	Signature	Signature
Address	Address	Address

At the time the Escrow Account is opened, the OWNER and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Escrow Agreement.

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

OWNER	CONTRACTOR	ESCROW AGENT
Title	Title	Title
Name	Name	Name
Signature	Signature	Signature
Address	Address	Address

19 – FINGERPRINTING CERTIFICATION FORM

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

I, _____, am an
[type or print name]

___ Owner of the company named below

___ Partner of the partnership named below

[check one] ___ President or CEO of the corporation named below

___ Principal of the joint venture named below

___ Other *[specify]*

The contracting entity named below is a contractor on the referenced project and as such hereby certifies:

___ [For compliance with Education Code Section 45125.2(a)(1)]
That a physical barrier will be erected at the workplace to limit employee contact with Owner's pupils.

___ [For compliance with Education Code Section 45125.2(a)(2)]
That the contracting entity named below will provide continual supervision and monitoring of the employees of the entity and its subcontractors through its employee _____. It has been ascertained by the Department of Justice that the named employee has not been convicted of a violent or serious felony. Contractor has requested subsequent arrest information from the Department of Justice concerning such employee and will immediately notify District and remove the employee from the Project if subsequent arrest information indicates the employee has been convicted of a serious or violent felony.

[check one or more]
___ [For compliance with Education Code Section 45125.2(a)(3)]
That the contracting entity named below will perform work under surveillance by school personnel as arranged in writing with the OWNER; any reimbursement obligation shall be stated in that written arrangement.

___ [For compliance with Education Code section 45125.1, including the written certification in subdivision (f).]

The contracting entity certifies under Education Code section 45125.1(f) that neither the employer nor any employees of the contracting entity named below or its subcontractors on the Project who are required by law to submit or have their fingerprints submitted to the Department of Justice, and who may interact with pupils, have been convicted of a felony defined in Education Code Section 45122.1. When the contracting entity performs the criminal background check, it shall immediately provide subsequent arrest and conviction information received through the subsequent arrest service to the District as required by Education Code section 45125.1(a). No covered employee shall interact with pupils until the required Department of Justice determination has been made, except as permitted by Education Code section 45125.1(e). Any reliance on a statutory exception shall be documented and reviewed by the District before the employee interacts with pupils.

___ [No pupil interaction or documented statutory exception]
The OWNER has documented that the identified personnel will not interact with pupils, or has documented an applicable statutory exception, including a qualifying construction safety method under Education Code section 45125.2. Limited contact alone does not establish an exemption from section 45125.1. The OWNER may require additional screening under section 45125.1(c).

_____
[name of contracting entity]

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

_____ _____
DATE SIGNATURE

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21 – GENERAL CONDITIONS

ARTICLE 1. DEFINITIONS

1. Action of the Governing board is a vote of a majority of the membership in a lawful meeting.

2. Addenda are the changes in plans specifications, drawings, and Project documents which have been authorized in writing by the OWNER, and which alter, explain, or clarify the Project documents prior to the bid deadline.

3. Approval means written authorization by OWNER for specific applications.

4. As shown, as indicated, as detailed refer to drawings accompanying the specification.

5. Project Documents includes collectively, to wit: Notice Calling for Bids, Information for Bidders, Bid Form, Designation of Subcontractors, Worker's Compensation Certificate, Change Orders, Shop Drawing Transmittals, Information Required of Bidder, all prequalification forms required under Public Contract Code section 20111.5 or 20111.6, as applicable, Noncollusion Declaration, Faithful Performance Bond, Payment Bond, Insurance Certificates, Guarantees, Contractor's Certificate Regarding Non-Asbestos Containing Materials, if any, General Conditions, Supplemental General Conditions, if any, Special Conditions, if any, Plans, Drawings, Specifications, the Agreement and all modifications, addenda, and amendments thereto.

6. Contractor or OWNER are those mentioned as such in the Agreement. They are treated throughout the Project documents as if they are of singular number and neuter gender.

7. Locality in which the work is performed means the county in which the public work is done.

8. Project is the planned undertaking as provided for in the Project documents by OWNER and CONTRACTOR.

9. Provide shall include "provide complete in place," that is, "furnish and install."

10. Safety Orders are those issued by the Division of Industrial Safety and OSHA safety and health standards for construction.

11. Standards, Rules, and Regulations referred to are recognized printed standards and shall be considered as one and a part of these specifications within limits specified.

12. Subcontractor, as used herein, includes those having a direct contractual relationship with CONTRACTOR and one who furnishes material worked to a special design according to plans, drawings, and specifications of this work, but does not include one who merely furnishes material not so worked.

13. Surety is the person, firm, or corporation that executes as surety the CONTRACTOR'S Bid Security, faithful performance bond and payment bond.

14. Work of the CONTRACTOR or subcontractor includes labor or materials (including, without limitation, equipment and appliances) or both, incorporated in, or to be incorporated in the construction covered by the complete contract.

15. A Worker includes laborer, worker, or mechanic.

ARTICLE 2. STATUS OF CONTRACTOR

1. CONTRACTOR is and shall at all times be deemed to be an independent contractor and shall be wholly responsible for the manner in which it performs the services required of it by the terms of the Project documents. Nothing herein contained shall be construed as creating the relationship of employer and employee, or principal and agent, between the OWNER and CONTRACTOR or any of CONTRACTOR'S agents or employees. CONTRACTOR assumes exclusively the responsibility for the acts of its employees as they relate to the services to be provided during the course and scope of their employment. CONTRACTOR, its agents and employees shall not be entitled to any rights or privileges of OWNER employees and shall not be considered in any manner to be OWNER employees. OWNER shall be permitted to monitor the activities of the contractor to determine compliance with the terms of the Project documents.

2. Contractors are required by law to be licensed and regulated by the Contractors State License Board (CSLB). Licensing, bid responsiveness, preaward verification and the consequences of an award to an unlicensed contractor are governed by applicable law, including Business and Professions Code section 7028.15. License status and current CSLB contact information may be obtained at https://www.cslb.ca.gov.

ARTICLE 3. CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY

1. Before CONTRACTOR makes any change in the name or legal nature of the CONTRACTOR'S entity, CONTRACTOR shall first notify the OWNER in writing and cooperate with OWNER in making such changes as the OWNER may request in the Project documents.

ARTICLE 4. CONTRACTOR'S SUPERVISION, PROSECUTION AND PROGRESS

1. During progress of the work, CONTRACTOR shall keep on the work site a competent superintendent satisfactory to OWNER. Before commencing the work herein, CONTRACTOR shall give written notice to OWNER through the CONSTRUCTION MANAGER of the name, qualifications and experience of such superintendent. If OWNER finds Superintendent unsatisfactory, CONTRACTOR shall replace the Superintendent with one acceptable to the OWNER. Superintendent shall not be changed except with written consent of OWNER, unless a superintendent proves to be unsatisfactory to CONTRACTOR and ceases to be in its employ, in which case, CONTRACTOR shall notify OWNER through the CONSTRUCTION MANAGER in writing and replace said Superintendent with one acceptable to the OWNER. Superintendent shall represent CONTRACTOR and all directions given to Superintendent shall be as binding as if given to CONTRACTOR.

2. CONTRACTOR shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills as may be necessary to perform the work in accordance with the Project documents. CONTRACTOR shall carefully study and compare all plans, drawings, specifications, and other instructions and shall at once report to the OWNER through the CONSTRUCTION MANAGER any error, inconsistency or omission which CONTRACTOR or its employees may discover. The CONTRACTOR represents itself to OWNER as a skilled, knowledgeable, and experienced CONTRACTOR. The CONTRACTOR shall be liable to the OWNER for damage resulting from errors, inconsistencies, or omissions in the Project documents that the CONTRACTOR recognized and which CONTRACTOR knowingly failed to report and which a similarly skilled, knowledgeable, and experienced contractor would have discovered.

3. The CONTRACTOR shall verify all indicated dimensions before ordering materials or equipment, or before performing work. The CONTRACTOR shall take field measurements, verify field conditions, and shall carefully compare such field measurements and conditions and other information known to the CONTRACTOR with the Project documents before commencing work. Errors, inconsistencies or omissions discovered shall be reported to the OWNER at once. Upon commencement of any item of work, the CONTRACTOR shall be responsible for dimensions related to such item of work and shall make any corrections necessary to make work properly fit at no additional cost to OWNER. This responsibility for verification of dimensions is a non-delegable duty and may not be delegated to subcontractors or agents.

4. Omissions from the plans, drawings or specifications, or the misdescription of details of work which are manifestly necessary to carry out the intent of the plans, drawings and specifications, or which are customarily performed, shall not relieve the CONTRACTOR from performing such omitted or misdescribed work, but they shall be performed as if fully and correctly set forth and described in the plans, drawings and specifications.

5. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The CONTRACTOR shall be responsible to see that the finished work complies accurately with the Project documents.

ARTICLE 5. SUBCONTRACTORS

1. CONTRACTOR agrees to bind every subcontractor by terms of the Project documents as far as such terms are applicable to subcontractor's work. If CONTRACTOR shall subcontract any part of the work, CONTRACTOR shall be as fully responsible to OWNER for acts and omissions of any subcontractor and of persons either directly or indirectly employed by an subcontractor, as it is for acts and omissions of persons directly employed by CONTRACTOR. Nothing contained in Project documents shall create any contractual relation between any subcontractor and OWNER, nor shall the contract documents be construed to be for the benefit of any subcontractor.

2. OWNER'S consent to any subcontractor shall not in any way relieve CONTRACTOR of any obligations under the Project documents and no such consent shall be deemed to waive any provision of any Project document.

3. CONTRACTOR must submit with its bid, a Designation of Subcontractors pursuant to the Subletting and Subcontracting Fair Practices Act. If CONTRACTOR specifies more than one subcontractor for the same portion of work or fails to specify a subcontractor, and such portion of the work exceeds one-half of one percent of the total bid, CONTRACTOR agrees that it is fully qualified to perform and shall perform such work itself, unless CONTRACTOR provides for substitution or addition of subcontractors. Substitution or addition of subcontractors shall be permitted only as authorized under the Subletting and Subcontracting Fair Practices Act, California Public Contract Code Section 4100, et. seq.

4. In accordance with California business and Professions Code Section 7059, if CONTRACTOR is designated as a "specialty contractor" (as defined in section 7058 of the Business and Professions Code), all work outside the Contractor's license specialty, except incidental and supplemental work authorized by Business and Professions Code section 7059(a), shall be performed by an appropriately licensed subcontractor in compliance with the Subletting and Subcontracting Fair Practices Act, California Public Contract Code Section 4100, et. seq.

5. A copy of each subcontract, if in writing, or, if not in writing, then a written statement signed by the Contractor giving the name of the subcontractor and the terms and conditions of such subcontract, shall be filed with the OWNER before the subcontractor begins work. Each subcontract shall contain a reference to the Agreement between the OWNER and the CONTRACTOR and the terms of that Agreement and all parts of the Project documents shall be made a part of such subcontract insofar as applicable to the work covered thereby. Each subcontract will provide for termination in accordance with Article 13 of these General Conditions. Each subcontract shall provide for its annulment by the CONTRACTOR at the order of the OWNER if in the OWNER'S opinion the subcontractor fails to comply with the requirements of the Project documents insofar as the same may be applicable to this work. Nothing herein contained shall relieve the CONTRACTOR of any liability or obligation hereunder.

ARTICLE 6. PROHIBITED INTERESTS

1. No official of OWNER who is authorized in such capacity and on behalf of OWNER to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the Project, shall become directly or indirectly interested financially in this Project or in any part thereof. No officer, employee, architect, attorney, engineer or inspector of or for OWNER who is authorized in such capacity and on behalf of OWNER to exercise any executive, supervisory or other similar functions in connection with construction of Project shall become directly or indirectly interested financially in this Project or in any part thereof. CONTRACTOR shall receive no compensation and shall repay OWNER for any compensation received by CONTRACTOR hereunder, should CONTRACTOR aid, abet or knowingly participate in violation of this Article 6.

ARTICLE 7. OWNER'S INSPECTOR

1. For work subject to DSA inspection requirements, the OWNER shall provide the required approved project inspector and special inspections. Inspection for other work shall meet the requirements of the authority having jurisdiction.

2. No work shall be performed by the CONTRACTOR solely upon the instructions or comments by the Inspector. The inspector has no authority to interpret the Project documents or order extra work and any extra work performed without the written instruction of the OWNER shall be at CONTRACTOR'S sole cost and expense and there will be no delay damages incurred by OWNER for such work.

3. No work shall be carried on except with the knowledge and under the inspection of said Inspector(s). He/She shall have free access to any or all parts of work at any time. CONTRACTOR shall furnish Inspector reasonable opportunities for obtaining such information as may be necessary to keep Inspector fully informed respecting progress and manner of work and character of materials. Inspection of work shall not relieve CONTRACTOR from any obligation to fulfill the Project documents. Inspector shall have authority to stop work whenever provisions of Project documents are not being complied with and such noncompliance is discovered. CONTRACTOR shall instruct its employees accordingly.

4. Inspector is not the "Agent" of the OWNER and the OWNER is not responsible for errors and omissions of the Inspector.

ARTICLE 8. ENGINEER(S) STATUS

1. The OWNERS CONSULTANT(S) shall be the OWNER'S representative during construction and shall observe the progress and quality of the work as outlined in the OWNER'S Agreement with the OWNERS CONSULTANT(S) for the specific discipline for which they have a contract with the OWNER and on OWNER'S behalf. OWNER'S CONSULTANT(S) shall have the authority to act on behalf of OWNER only to the extent expressly provided in the Project documents. OWNER'S CONSULTANT(S) shall have authority to stop work whenever such stoppage may be necessary in OWNERS CONSULTANT(S) reasonable opinion to insure the proper execution of the Project documents.

2. The ENGINEER(S) shall be, in the first instance, the judge of the performance of the work. OWNER'S CONSULTANT(S) shall exercise authority under the Project documents to enforce CONTRACTOR'S faithful performance.

3. The OWNERS CONSULTANT(S) shall have all authority and responsibility established by law. The OWNERS CONSULTANT(S) has the authority to enforce compliance with the Project documents and the CONTRACTOR shall promptly comply with instructions from the OWNERS CONSULTANT (S) or an authorized representative of the OWNERS CONSULTANT (S).

4. On all questions related to the quantities, the acceptability of material, equipment or workmanship, the execution, progress or sequence of work, the interpretation of plans, specifications or drawings, and the acceptable performance of the Contractor pursuant to the decision of the OWNERS CONSULTANT(S) shall govern and shall be precedent to any payment unless otherwise ordered by the Governing Board. The progress and completion of the work shall not be impaired or delayed by virtue of any questions or dispute arising out of or related to the foregoing matters and the instructions of the OWNERS CONSULTANT(S) relating thereto.

5. Direction of the work by the OWNERS CONSULTANT(S) shall in no way imply that the OWNERS CONSULTANT(S) or his or her representatives are in any way responsible for the safety of the CONTRACTOR or its employees or that the OWNERS CONSULTANT(S) or his or her representatives will maintain supervision over the CONTRACTOR'S construction methods or personnel other than to ensure that the quality of the finished work is in accordance with the Project documents.

ARTICLE 9. NOTICE OF TAXABLE POSSESSORY INTEREST

1. The terms of the Agreement may result in the creation of a possessory interest. If such a possessory interest is vested in a private party to the Agreement, the private party may be subjected to the payment of property taxes levied on such interest.

ARTICLE 10. ASSIGNMENT OF ANTITRUST ACTIONS

1. Public Contract Code Section 7103.5 provides:
   a. In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.
   b. CONTRACTOR, for itself, and all subcontractors, agrees to assign to OWNER all rights, title, and interests in and to all such causes of action CONTRACTOR and all subcontractors may have under the Agreement. This assignment shall become effective at the time OWNER tenders final payment to the CONTRACTOR, and CONTRACTOR shall require assignments from all subcontractors to comply herewith.

ARTICLE 11. OTHER CONTRACTS

1. OWNER reserves the right to let other contracts in connection with this work. CONTRACTOR shall afford other contractors' reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly connect and coordinate its work with such other contractors.

2. If any part of CONTRACTOR'S work depends for proper execution or results upon work of any other contractor, the CONTRACTOR shall inspect and promptly report to the OWNER through the CONSTRUCTION MANAGER in writing any defects in such work that renders it unsuitable for such proper execution and results. CONTRACTOR will be held accountable for damages to OWNER for that work which it failed to inspect or should have inspected. CONTRACTOR'S failure to inspect and report shall constitute its acceptance of other contractor's work as fit and proper for reception of its work, except as to defects which may develop in other contractor's work after execution of CONTRACTOR'S work.

3. To insure proper execution of its subsequent work, CONTRACTOR shall measure and inspect work already in place and shall at once report to the OWNER through the CONSTRUCTION MANAGER in writing any discrepancy between executed work and Project documents.

4. CONTRACTOR shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by OWNER in prosecution of the Project to the end that CONTRACTOR may perform this Agreement in the light of such other contracts, if any.

5. Nothing herein contained shall be interpreted as granting to CONTRACTOR exclusive occupancy at site of Project. CONTRACTOR shall not cause any unnecessary hindrance or delay to any other contractor working on Project. If simultaneous execution of any contract for Project is likely to cause interference with performance of some other contract or contracts, OWNER shall decide which contractor shall cease work temporarily and which contractor shall continue or whether work can be coordinated so that contractors may proceed simultaneously.

6. OWNER shall not be responsible for any damages suffered or extra costs incurred by CONTRACTOR resulting directly or indirectly from award or performance or attempted performance of any other contract or contracts on Project, or caused by any decision or omission of OWNER respecting the order of precedence in performance of contracts.

ARTICLE 12. OCCUPANCY

1. OWNER reserves the right to occupy buildings and/or portions of the site at any time before completion, and such occupancy shall not constitute final acceptance of any part of work covered by this Agreement, nor shall such occupancy extend the date specified for completion of the work. Beneficial occupancy of building(s) does not commence any warranty period nor shall it entitle CONTRACTOR to any additional compensation due to such occupancy.

ARTICLE 13. OWNER'S RIGHT TO TERMINATE AGREEMENT

1. Any termination, suspension or enforcement action based on insolvency or bankruptcy is subject to applicable federal bankruptcy law and any required court authorization. If the CONTRACTOR refuses or fails to complete the work or any separable part thereof with such diligence as will insure its completion within the time specified or any extension thereof, or fails to complete said work within such time, or if the CONTRACTOR should file a petition for relief as a debtor, or should relief be ordered against CONTRACTOR as a debtor under Title 11 of the United States Code, or if CONTRACTOR should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should refuse or should fail to supply enough properly skilled workers or proper materials to complete the work in the time specified, or if CONTRACTOR should fail to make prompt payment to subcontractors for materials or labor, or disregard laws or ordinances or instructions of OWNER, or if CONTRACTOR or its subcontractors should otherwise be guilty of a violation of any provision of this Agreement, then OWNER may, without prejudice to any other right or remedy, serve written notice upon CONTRACTOR and its surety of OWNER'S intention to terminate this Agreement, such notice to contain the reasons for such intention to terminate, and unless within ten (10) days after the service of such notice such condition shall cease or such violation shall cease and arrangements satisfactory to OWNER for the correction thereof be made, this Agreement shall upon the expiration of said ten (10) days, cease and terminate. In such case, CONTRACTOR shall not be entitled to receive any further payment until work is finished to OWNER'S satisfaction.

2. In the event of any such termination, OWNER shall immediately serve written notice thereof upon surety and CONTRACTOR, and surety shall have the right to take over and perform this Agreement, provided, however, that if surety within seven (7) days after service upon it of said notice of termination does not give OWNER written notice of its intention to take over and perform this Agreement or does not commence performance thereof within fifteen (15) days after date of serving such notice of termination by OWNER on surety, OWNER may take over the work and prosecute same to completion Agreement or by any other method it may deem advisable for the account and at the expense of CONTRACTOR, and CONTRACTOR and its surety shall be liable to OWNER for any excess cost or other damages occasioned by the OWNER thereby. Time is of the essence in this Agreement. If the OWNER

takes over the work as hereinabove provided, the OWNER may, without liability for so doing, take possession of and utilize in completing the work such materials, supplies, equipment and other property belonging to the CONTRACTOR as may be on the site of the work and necessary therefore.

3. If the expense of finishing the work, including compensation for additional architectural, managerial, and administrative services, shall exceed the unpaid balance of the Agreement, CONTRACTOR shall pay the difference to OWNER. Expense incurred by OWNER as herein provided, and damage incurred through CONTRACTOR'S default, shall be certified to OWNER by the CONSTRUCTION MANAGER. If unpaid balance under the Agreement shall exceed expense of finishing the work, including compensation for additional architectural, managerial, and administrative services, such excess shall be paid to CONTRACTOR.

4. In the event that sufficient funds are not appropriated to complete the Project or the OWNER determines that sufficient funds are not available to complete the Project, OWNER may terminate or suspend the completion of the Project at any time by giving written notice to the CONTRACTOR. In the event that the OWNER exercises this option, the OWNER shall pay for any and all work and materials completed or delivered onto the site, and the value of any and all work then in progress and orders actually placed which cannot be canceled up to the date of notice of termination. The value of work and materials paid for shall include a factor of 15% for the CONTRACTOR'S overhead and profit and there shall be no other costs or expenses paid to CONTRACTOR. All work, materials and orders paid for pursuant to this provision shall become the property of the OWNER. OWNER, may, without cause, order CONTRACTOR in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as OWNER may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

5. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the OWNER.

ARTICLE 14. BONDS

1. For contracts of $25,000 or more, CONTRACTOR shall furnish separate Payment and Faithful Performance Bonds, each for not less than one hundred percent (100%) of the total contract amount, before execution of the Agreement and with OWNER approval before work begins. For contracts below $25,000, bonds are required only when another applicable law or funding requirement requires them. Bonds shall be in the form set forth in these Project documents.

ARTICLE 15. SUBSTITUTION OF SECURITIES

1. Pursuant to the requirements of Public Contract Code Section 22300, upon CONTRACTOR'S request, OWNER will make payment to CONTRACTOR of any earned retention funds withheld from payments under this Agreement if CONTRACTOR deposits with the OWNER or in escrow with a state or federally chartered bank in California approved by the OWNER consistently with the CONTRACTOR's rights under Public Contract Code section 22300 acceptable, eligible securities described in Public Contract Code section 22300(d), upon the following conditions.

    a. CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.
    b. All expenses relating to the substitution of securities under said Section 22300 and under this Article 15, including, but not limited to OWNER'S overhead and administrative expenses, and expenses of escrow agent shall be the responsibility of the CONTRACTOR.
    c. If CONTRACTOR shall choose to enter into an escrow agreement, such agreement shall be satisfactory to OWNER, which agreement shall be in the form attached hereto as part of the Project documents and which shall allow for the conversion to cash to provide funds to meet defaults by the CONTRACTOR including, but not limited to, termination of the CONTRACTOR'S control over the work, stop notices filed pursuant to law, assessment of liquidated damages or amount to be kept or retained under the provisions of the Project documents.
    d. Securities, if any, shall be returned to CONTRACTOR only upon satisfactory completion of the Agreement.
    e. To minimize the expense caused by such substitution of securities, CONTRACTOR shall, prior to or at the time CONTRACTOR requests to substitute security, deposit sufficient security to cover the entire amount to be then withheld and to be withheld under the General Conditions of this Agreement. Should the value of such substituted security at any time fall below the amount for which it was substituted, or any other amount which the OWNER determines to withhold, CONTRACTOR shall immediately and at CONTRACTOR'S expense deposit additional security qualifying under said Section 22300 until the total security deposited is no less than equivalent to the amount subject to withholding under the Agreement.

2. In the alternative, under Section 22300, CONTRACTOR, at its own expense, may request OWNER to make payment of earned retention funds directly to the escrow agent. Also at the expense of CONTRACTOR, CONTRACTOR may direct investment of the payments into securities, and CONTRACTOR shall receive the interest earned on the investment upon the same conditions as shown in paragraph (a) for securities deposited by CONTRACTOR. Upon satisfactory completion of the Agreement, CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by the escrow agent from OWNER, pursuant to the terms of Section 22300. CONTRACTOR shall pay to each subcontractor, not later than twenty (20) days after receipt of payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount withheld to ensure performance of the CONTRACTOR.

3. If any provision of this Article 15 shall be found to be illegal or unenforceable, then, notwithstanding, this Article 15 shall remain in full force and effect, and such provision shall be deemed stricken.

ARTICLE 16. FIRE INSURANCE

1. Owner will provide *Course of Construction* insurance. The Owner's course of construction insurance will cover only items incorporated into the improvements or materials suitably stored on-site, unless otherwise indicated.

2. VENDOR/SUPPLIER agree to store and protect from all causes of loss the products/materials/supplies sold to CONSTRUCTION MANAGER (Infinity Communications and Compliance, Inc.) and/or the Owner. In addition, the vendor agrees to purchase and maintain in full force, for the duration of the job, proper insurance coverages, which will indemnify Infinity Communications and Compliance, Inc. and/or the Owner or ENGINEER(s) for loss from any and all destruction to such products/materials/supplies. A certificate of insurance indicating above coverage shall be submitted to CONSTRUCTION MANAGER (Infinity Communications and Compliance, Inc.).

ARTICLE 17. COMPREHENSIVE GENERAL LIABILITY AND PROPERTY DAMAGE INSURANCE

1. The following indemnity and defense obligations apply only to the extent permitted by Civil Code section 2782. They do not require indemnification for liability that section prohibits transferring, including the public agency's active negligence and the sole-negligence, willful-misconduct and furnished-design liabilities described in subdivision (a). The CONTRACTOR agrees to and does hereby indemnify and hold harmless the OWNER, its governing board, officers, agents, employees, and CONSULTANTS from every claim or demand made, and every liability, loss, damage, or expense, of any nature whatsoever, which may be incurred by reason of: Liability for damages for (1) death or bodily injury to persons; (2) injury to, loss or theft of property; or (3) any other loss, damage or expense arising under either (1) or (2) above, sustained by the CONTRACTOR upon or in connection with the work called for in this Project , except for liability resulting from the active negligence, or willful misconduct of the OWNER.

2. Any injury to or death of any person(s) or damage, loss or theft of any property caused by any act, neglect, default or omission of the CONTRACTOR, or any person, firm, or corporation employed by the CONTRACTOR, either directly or by independent contract, arising out of, or in any way connected with the work covered by this Agreement, whether said injury or damage occurs either on or off OWNER property, if the liability arose from the negligence or willful misconduct of anyone employed by the CONTRACTOR, either directly or by independent contract.

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

4. CONTRACTOR shall take out, prior to commencing the work, and maintain, during the life of this contract, and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain:

Comprehensive General Liability Insurance for injuries including accidental death, to any one person in an amount not less than	**$1,000,000.00**
And	
Subject to the same limit for each person on account of one accident, in an amount not less than	**$1,000,000.00**
And	

Property Damage Insurance
in an amount not less than **$1,000,000.00**

NOTE: The Contractor shall name, on any policy of insurance required under Article 17, the Owner, the Engineer(s), and the Consultants, as additional insured. Subcontractors shall name the Contractor, the Owner, the Engineer(s), and the Consultants, as additional insured. Infinity Communications and Compliance, Inc., shall be listed as certificate holder. Contractor shall submit SIX (6) ORIGINAL CERTIFICATES to the Owner.

Insurance Covering Special Hazards: The following special hazards shall be covered by rider or riders to above-mentioned comprehensive general liability insurance or property damage insurance policy or policies of insurance, or by special policies of insurance in amounts as follows:

a. Automotive and truck where operated in amounts as above.
b. Material hoist where used in amounts as above.

ARTICLE 18. WORKERS' COMPENSATION INSURANCE

1. In accordance with the provisions of Section 3700 of the California Labor Code, the CONTRACTOR and every subcontractor shall be required to secure the payment of compensation to its employees.

2. The CONTRACTOR shall provide, during the life of the Agreement, workers' compensation insurance for all of its employees engaged in work under this Agreement, on or at the site of the Project, and, in case any of its work is sublet, the CONTRACTOR shall require the subcontractor similarly to provide workers' compensation insurance for all the latter's employees. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by the CONTRACTOR'S insurance. In case any class of employees engaged in work under this Agreement, on or at the site of the Project, is not protected under the workers' compensation statute, the CONTRACTOR shall provide or shall cause a subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected before subcontractor commences work. The CONTRACTOR shall file with the OWNER certificates of its insurance protecting workers and a 30-day notice shall be provided to OWNER before the cancellation or reduction of any policy of CONTRACTOR or subcontractor. CONTRACTOR shall submit proof of insurance and shall provide endorsements on the forms provided by the OWNER or on forms approved by the OWNER. Such endorsements shall be submitted concurrently with the Project documents.

ARTICLE 19. PROOF OF CARRIAGE OF INSURANCE

1. CONTRACTOR shall not commence work nor shall it allow any subcontractor to commence work under this Agreement until all required insurance certificates and endorsements have been obtained and delivered in duplicate to and approved by OWNER. Such insurance shall be with an insurance company with a minimum rating of "A-VIII", as rated by the current edition of Best's Key Rating Guide, published by A.M. Best Co., Oldwick, New Jersey 08858, and admitted or qualified to do business in California.

2. Certificates and insurance shall include the following:
   a. A clause stating:
      1) "This policy shall not be canceled or reduced in required limits of liability or amount of insurance until notice has been mailed to OWNER stating date of cancellation or reduction. Date of cancellation or reduction may not be less than thirty (30) days after date of mailing notice."
      2) Language stating in particular those insured, extent of insurance, location and operation to which insurance applies, expiration date, to whom cancellation and reduction notice will be sent, and length of notice period.
      3) Statement that the OWNER, CONSTRUCTION MANAGER, and ENGINEER(S) are named additional insured under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by the OWNER.
3. In case of CONTRACTOR'S failure to provide insurance as required by the Agreement, the OWNER may, at OWNER'S option, take out and maintain at the expense of the CONTRACTOR, such insurance in the name of CONTRACTOR, or subcontractor, as the OWNER may deem proper and may deduct the cost of taking out and maintaining such insurance from any sums which are due or to become due to the CONTRACTOR under this Agreement.

ARTICLE 20. DRAWINGS AND SPECIFICATIONS

1. Drawings and Specifications are intended to delineate and describe the Project and its component parts to such a degree as will enable skilled and competent contractors to intelligently bid upon the work, and to carry said work to a successful conclusion.

2. Drawings and Specifications are intended to comply with all laws, ordinances, rules and regulations of constituted authorities having jurisdiction, and where referred to in the Project documents, said laws, ordinances, rules and regulations shall be considered as a part of the Agreement within the limits specified. The CONTRACTOR shall bear all expenses of correcting work done contrary to said laws, ordinances, rules and regulations and if the CONTRACTOR performed same (1) without first consulting the OWNER through the CONSTRUCTION MANAGER for further instructions regarding said work, or (2) disregarded the OWNER'S instructions regarding said work.

3. Questions regarding interpretation of drawings and specifications shall be clarified by the ENGINEER(S) through the CONSTRUCTION MANAGER; provided, however, that in the event ENGINEER(S) determines that CONTRACTOR'S requests for clarification or interpretation are not justified or do not reflect adequate competent supervision or knowledge by the CONTRACTOR OR his/her subcontractors, CONTRACTOR shall be required to pay ENGINEER(S)'S reasonable and customary fees in processing and responding to such requests. Should the CONTRACTOR commence work or any part thereof without seeking clarification, CONTRACTOR waives any claim for extra work or damages as a result of any ambiguity, conflict or lack of information.

4. Figured dimensions on drawings shall govern, but work not dimensioned shall be as directed. Work not particularly shown or specified shall be the same as similar parts that are shown or specified. Large-scale drawings shall take precedence over smaller scale drawings as to shape and details of construction. Specifications shall govern as to materials, workmanship, and installation procedures. Drawings and specifications are intended to be fully cooperative and to agree. If CONTRACTOR observes that drawings and specifications are in conflict, CONTRACTOR shall promptly notify the OWNER through the CONSTRUCTION MANAGER in writing, and any necessary changes shall be adjusted as provided in the Article entitled "Changes and Extra Work;" provided, however, that the specification calling for the higher quality material or workmanship shall prevail without additional cost to OWNER.

5. Materials or work described in words, which so applied, has a well-known technical or trade meaning shall be deemed to refer to such recognized standards.

6. It is not the intention of the Agreement to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of such "trade name or "trade term" shall be considered a sufficient notice to CONTRACTOR that it will be required to complete the work so named with all its incidental and accessory items according to the best practices of the trade.

7. The naming of any material and/or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and/or labor necessary to achieve full and complete functioning of the materials and/or equipment as per best practices of the trade(s) involved, unless specifically noted otherwise.

ARTICLE 21. OWNERSHIP OF DRAWINGS

1. All plans, drawings, designs, specifications, and other incidental architectural and engineering work or materials and other Project documents and copies thereof furnished by OWNER are OWNER'S property. They are not to be used in other work and are to be returned to OWNER on request at completion of work, and may be used by OWNER as it may require, without any additional costs to OWNER.

ARTICLE 22. DETAIL DRAWINGS AND INSTRUCTIONS

1. In case of ambiguity, conflict, or lack of information, OWNERS CONSULTANT(S) the CONSTRUCTION MANAGER shall furnish additional instructions by means of drawings or otherwise, necessary for proper execution of work. All such drawings and instructions shall be consistent with Project documents, true developments thereof, and reasonably inferable there from. Such additional instructions shall be furnished with reasonable promptness, provided that CONTRACTOR informs the OWNER, through the CONSTRUCTION MANAGER, of the relationship of the request to the critical path of construction.

2. Work shall be executed in conformity therewith and CONTRACTOR shall do no work without proper drawings and instructions.

3. The ENGINEER(S) will furnish necessary additional details to more fully explain the work, which details shall be considered as part of the Project documents.

4. Should any details be more elaborate, in the opinion of the CONTRACTOR, than scale drawings and specifications warrant, CONTRACTOR shall give written notice thereof to the OWNER through the CONSTRUCTION MANAGER

within five (5) days of the receipt of same. In case no notice is given to the OWNER within five (5) days, it will be assumed the details are reasonable development of the scale drawings. In case notice is given, then it will be considered, and if found justified, the OWNERS CONSULTANT(S) will either modify the drawings or shall recommend to OWNER a change order for the extra work involved.

5. All parts of the described and shown construction shall be of the best quality of their respective kinds and the CONTRACTOR is hereby advised to use all diligence to become fully involved as to the required construction and finish, and in no case to proceed with the different parts of the work without obtaining first from the OWNER through the CONSTRUCTION MANAGER such directions and/or drawings as may be necessary for the proper performance of the work.

6. If it is found at any time, before or after completion of the work, that the CONTRACTOR has varied from the drawings and/or specifications, in materials, quality, form or finish, or in the amount or value of the materials and labor used, the OWNER'S CONSULTANT(S) through the CONSTRUCTION MANAGER shall make a recommendation: (1) that all such improper work should be removed, remade and replaced, and all work disturbed by these changes be made good at the CONTRACTOR'S expense; or (2) that the OWNER deduct from any amount due CONTRACTOR, the sum of money equivalent to the difference in value between the work performed and that called for by the drawings and specifications. OWNER shall determine such difference in value. The OWNER, at its option, may pursue either recommendation.

ARTICLE 23. SHOP DRAWINGS

1. CONTRACTOR shall check and verify all field measurements and shall submit to CONSTRUCTION MANAGER within ten (10) calendar days of the date specified on the Notice to Proceed three (3) copies, checked and approved by CONTRACTOR, of all shop or setting list drawings, schedules, and materials list required for the work of various trades. OWNERS CONSULTANT(S) shall review such drawings, schedules and materials list only for conformance with design concept of Project and compliance with information given in Project documents, and return as approved or disapproved with guidance as to required corrections within ten (10) calendar days. CONTRACTOR shall make any corrections required by OWNERS CONSULTANT(S), file three (3) corrected copies with OWNERS CONSULTANT(S), and furnish such other copies as may be needed for construction within five (5) calendar days. OWNERS CONSULTANT(S)'S approval of such drawings, schedules, or materials list shall not relieve CONTRACTOR from responsibility for deviations unless CONTRACTOR has in writing called OWNERS CONSULTANT(S)'S attention to such deviations at time of submission and secured OWNERS CONSULTANT(S)'S written approval, nor shall it relieve CONTRACTOR from responsibility for errors in shop drawings or schedules.

2. All submittals of shop drawings, catalog cuts, data sheets, schedules and material lists shall be complete and shall conform to contract drawings and specifications.

3. The term "shop drawing" as used herein shall be understood to include, but not be limited to, detail design calculations, fabrication and installation drawings, lists, graphs, and operating instructions.

4. Shop drawings shall be submitted at a time sufficiently early to allow review of same by the OWNERS CONSULTANT(S), and to accommodate the rate of construction progress required under the Project documents. CONTRACTOR will be required to pay OWNERS CONSULTANT(S)'S reasonable and customary fees in order to expedite review of shop drawings which are not submitted in a timely fashion.

5. An accurately completed transmittal form using the format bound herein shall accompany all shop drawing submittals. Any shop drawing submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal. The CONTRACTOR may authorize a material or equipment supplier to deal directly with the OWNERS CONSULTANT(S) with regard to shop drawings, however, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the CONTRACTOR.

6. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of shop drawings on various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole.

7. CONTRACTOR'S review and approval of shop drawings shall include the following statement which appears on the submittal identification Form P-905 in the Construction Management Manual:

"The CONTRACTOR has reviewed and approved not only the field dimensions but the construction criteria and has also made written notation regarding any information in the shop drawings that does not conform to the Project documents.

_____

Signature of CONTRACTOR

8. Within **thirty (30)** calendar days after receipt of shop drawings, the OWNERS CONSULTANT(S) through the CONSTRUCTION MANAGER will return one or more prints of each drawing to CONTRACTOR with his or her comments noted thereon. The CONTRACTOR shall make a complete and acceptable submittal to the OWNER through the CONSTRUCTION MANAGER by the second submission of drawings. The OWNER shall withhold funds due the CONTRACTOR to cover additional costs of the OWNERS CONSULTANT(S)'S review beyond the second submission and any other costs incurred by OWNER.

9. If prints of the shop drawing are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision of said drawing would not be required. If prints of the drawing are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal resubmittal of said drawings will not be required. If prints of the drawing are returned to the CONTRACTOR marked "REVISE AND RESUBMIT," the CONTRACTOR shall revise said drawing and shall resubmit three (3) copies of the revised drawing to the OWNERS CONSULTANT(S) through the CONSTRUCTION MANAGER. If prints of the drawing are returned to the CONTRACTOR marked "REJECTED RESUBMIT," the CONTRACTOR shall resubmit three (3) new copies of the drawing to the OWNER through the CONSTRUCTION MANAGER.

10. Fabrication of an item shall not be commenced before the OWNERS CONSULTANT(S) has reviewed the pertinent shop drawings and returned copies to the CONTRACTOR marked with "NO EXCEPTIONS TAKEN," or "MAKE CORRECTIONS NOTED." Revisions indicated on shop drawings shall be considered as changes necessary to meet the requirements of the Project documents and shall not be taken as the basis of claims for extra work. The review of such drawings by the OWNERS CONSULTANT(S) will be limited to checking for general agreement with the Project documents, and shall in no way relieve the CONTRACTOR of responsibility for errors or omissions contained therein, nor shall such review operate to waive or modify any provision contained in the Project documents. Fabricating dimensions, quantities of material, applicable code requirements, and other contract requirements shall be the CONTRACTOR'S responsibility.

11. No work represented by required shop drawings shall be purchased or commenced until the applicable submittal has been approved. The work shall conform to the approved shop drawings and all other requirements of the Project documents. The CONTRACTOR shall not proceed with any related work which may be affected by the work covered under shop drawings until the applicable shop drawings have been approved, particularly where piping, machinery, and equipment and the required arrangements and clearances are involved.

12. Except where the preparation of a shop drawing is dependent upon the approval of a prior shop drawing, all shop drawings pertaining to the same class or portion of the work shall be submitted simultaneously.

13. THE CONTRACTOR SHALL HAVE NO CLAIM FOR DAMAGES OR EXTENSION OF TIME DUE TO ANY DELAY RESULTING FROM THE CONTRACTOR HAVING TO MAKE THE REQUIRED REVISIONS TO SHOP DRAWINGS UNLESS REVIEW BY THE OWNERS CONSULTANT(S) OF SAID DRAWINGS IS DELAYED BEYOND THE TIME PROVIDED HEREINBEFORE AND THE CONTRACTOR CAN ESTABLISH THAT THE OWNERS CONSULTANT(S)'S DELAY IN REVIEW ACTUALLY RESULTED IN A DELAY IN THE CONTRACTOR CONSTRUCTION SCHEDULE.

ARTICLE 24. LAYOUT AND FIELD ENGINEERING

1. All field engineering required for laying out of this work and establishing grades for earthwork operations shall be furnished by CONTRACTOR at its expense. Such work shall be done by a qualified civil engineer approved by the OWNER through the CONSTRUCTION MANAGER. Any required "Record" drawings of site development shall be prepared by the approved civil engineer.

ARTICLE 25. SOILS INVESTIGATION REPORT

1. When a soils investigation report has been obtained from test holes at the site, such report is available for the CONTRACTOR'S use in preparing its bid and work under this Agreement. Any information obtained from such report or any information given on drawings as to surface and subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only. CONTRACTOR is required to make a visual examination of site and must make whatever test CONTRACTOR deems appropriate to determine surface and

subsurface soil conditions. If, during the course of work under this Agreement, CONTRACTOR encounters subsurface or latent conditions that differ materially from those indicated in the soils investigation report, than CONTRACTOR shall notify the OWNER within five (5) working days of discovery of the condition.

WARNING: OWNER DOES NOT WARRANT THE SOILS AT THE PROJECT SITE. SOILS INVESTIGATION REPORT IS PROVIDED FOR CONTRACTOR'S INFORMATION ONLY. CONTRACTOR HAS CONDUCTED AN INDEPENDENT INVESTIGATION OF THE PROJECT SITE AND THE SOILS CONDITIONS OF THE SITE. OWNER DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS FOR THE PURPOSES OF DETERMINING CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION.

2. Site-condition claims shall be administered under Article 27 and the applicable changes and claims procedures. Nothing in this Article waives rights provided by Public Contract Code section 7104 or other nonwaivable law.

ARTICLE 26. TESTS AND INSPECTIONS

1. Tests and inspections will comply with Code of Regulations of authorities having jurisdiction.

2. If the Agreement, OWNER'S instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, CONTRACTOR shall give notice in accordance with such authority of its readiness for observation or inspection at least two (2) working days prior to being tested or covered up. If inspection is by authority other than OWNER, CONTRACTOR shall inform the OWNER'S Inspector of the date fixed for such inspection. Required certificates of inspection shall be secured by CONTRACTOR. Observations by OWNER'S Inspector shall be promptly made, and where practicable, at source of supply. If any work should be covered up without approval or consent of OWNER'S Inspector, it must be uncovered for examination and satisfactorily reconstructed at CONTRACTOR'S expense in compliance with the Agreement. Costs of tests, inspections and any materials found to be not in compliance with the Agreement shall be paid for by CONTRACTOR. Other costs for test and inspection shall be paid by the OWNER.

ARTICLE 27. TRENCHES

1. CONTRACTOR shall provide adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation that conform to applicable safety standards.

2. If this Agreement involves the excavation of any trench or trenches five feet or more in depth, the CONTRACTOR shall, in advance of excavation, submit to the OWNER or to whomever OWNER designates a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the Shoring System Standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer employed by the CONTRACTOR, and all costs therefore shall be included in the price named in the Agreement for completion of the work as set forth in the Project documents. In no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until the plan has been accepted by the OWNER or by a registered civil or structural engineer employed by the OWNER and delegated to accept the plan. The CONTRACTOR shall separately obtain each permit required by Labor Code section 6500 and deliver permit evidence to the OWNER before covered excavation. Labor Code sections 6500 and 6705; Health and Safety Code section 17922.5.

3. If this Agreement involves the digging of trenches or excavations that extend deeper than four feet below the surface, the following shall apply:

   a. The CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the OWNER, in writing, of any:

      1) Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law.

      2) Subsurface or latent physical conditions at the site differing materially from those indicated by information about the site made available to bidders before the bid deadline.
      3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

4. The OWNER shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR'S cost of, or the time required for, performance of any part of the work shall issue a change order under the procedures described in the Project documents.

5. In the event a dispute arises between the OWNER and the CONTRACTOR, whether the conditions materially differ or involve hazardous waste, or cause a decrease or increase in the CONTRACTOR'S cost of, or time required for, performance of any part of the work, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the Project documents, but shall proceed with all the work to be performed under the Project documents. The CONTRACTOR shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties. Public Contract Code Section 7104.

ARTICLE 28. DOCUMENTS ON WORK

1. CONTRACTOR shall keep on the job site at all times one legible copy of all Project documents, including addenda and change orders, and all approved drawings, plans, schedules and specifications. Said documents shall be kept in good order and available to OWNERS CONSULTANT(S), and all authorities having jurisdiction. CONTRACTOR shall be acquainted with and comply with the provisions of said regulations as they relate to this project. (See particularly the duties of Contractor, California Code of Regulations, title 24, Part 1, section 4-343, in the edition governing the DSA-approved Project documents). CONTRACTOR shall also be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project, particularly Titles 8 and 17. The Project-specific documents shall identify the governing California Building Standards Code edition, applicable supplements and errata, and the DSA application or other approval information establishing that edition.

ARTICLE 29. STATE AUDIT

1. Pursuant to and in accordance with the provisions of Government Code Section 8546.7, or any amendments thereto, all books, records and files of the OWNER, the CONTRACTOR, or any subcontractor connected with the performance of this Agreement involving the expenditure of public funds in excess of Ten Thousand Dollars ($10,000.00), including, but not limited to, the costs of administration of the Agreement, shall be subject to the examination and audit of the State Auditor at the request of the OWNER or as part of any audit of the OWNER for a period of three (3) years after final payment is made under this Agreement. For E-Rate-funded work, each program participant shall retain required program records for at least ten years after the later of the last day of the applicable funding year or the service-delivery deadline for the funding request. Longer applicable legal, funding and dispute-preservation requirements also apply.

ARTICLE 30. SUBSTITUTIONS

1. Should the bidder wish to request prior to bid opening, any substitution for the materials, process, service or equipment specified, the bidder shall submit a written request at least ten (10) days before the bid opening date and hour. If the substituted item is acceptable, the OWNER will approve it in an Addendum issued to all bidders of record. Requests submitted later than this pre-bid deadline may be reviewed under the separate post-award equal-product procedure, but shall not change the bid requirements unless approved by addendum before bidding.

2. With respect to any materials, process, service or equipment listed in the bid, unless the bidder clearly indicates in its bid that it is proposing to use an "equal" product, its bid shall be considered as offering the material, process, service or equipment referred to by the brand name or trade name specified.

3. The brand name or trade name, if any, of a proposed substitute item shall be inserted in the space provided in the bid or shall be otherwise clearly identified in the bid. The awarding of the contract to a bidder who has indicated in its bid that it is proposing to use an "equal" item shall not constitute an admission by the OWNER of the equality of that item. It is expressly understood and agreed by the bidder that, in so awarding this contract, the OWNER reserves the right to reject any such proposed substituted item. It is further expressly understood and agreed by bidder that in the event the OWNER rejects a proposed "equal" item, the bidder will then supply the material, process, service or equipment designated by brand name or trade name or a substitute therefore which meets with the approval of the OWNER.

4. With respect to all proposed substitutions of "equal" items, the bidder will submit all pertinent and appropriate data substantiating its request for substitutions no later than thirty-five (35) calendar days after award of the contract. The OWNER is not responsible for locating or securing any information that is not included in such substantiating data. The burden of proof as to the quality or suitability of proposed substituted items shall be borne by the bidder. The OWNER shall be the sole judge as to the quality and suitability of proposed substituted items, and decisions of the OWNER shall be final and conclusive. Unless extended by the mutual agreement of the parties, the OWNER

shall notify the successful bidder of the decision concerning the proposed substitution of "equal" items within thirty (30) calendar days after receipt of complete substantiating data. Also such decisions by the OWNER shall be in writing, and no proposed substituted item shall be deemed approved unless the OWNER has so indicated in writing. These time limitations shall be complied with strictly, and in no case will an extension of time for completion be granted because of the bidder's failure to request the substitution of an item at the times and in the manner set forth herein. Substitution requests and decisions shall comply with Public Contract Code section 3400.

5. A preference for California-manufactured supplies applies only if expressly stated in the solicitation, authorized by applicable law, and consistent with applicable funding requirements. Any preference under Government Code section 4334 shall satisfy each condition of that section.

ARTICLE 31. SAMPLE

1. CONTRACTOR shall furnish for approval, within thirty-five (35) calendar days following award of contract, all samples as required in specifications together with catalogs and supporting data required by OWNERS CONSULTANT(S). This provision shall not authorize any extension of time for performance of the work. OWNERS CONSULTANT(S) shall review such samples, as to conformance with design concept of work and for compliance with information given in Project documents and approve or disapprove same within ten (10) working days from receipt of same.

2. Sampling, preparation and testing shall comply with the specific ASTM standards and editions identified in the technical specifications or incorporated by the governing code. The design professional shall resolve an omitted designation or edition in writing before the affected work.

3. Samples shall, upon demand of OWNERS CONSULTANT(S) or OWNER, be submitted for tests or examinations and considered before incorporation of same into the work. CONTRACTOR shall be solely responsible for delays due to samples not being submitted in time to allow for tests. Acceptance or rejection will be expressed in writing. Work shall be equal to approved samples in every respect. Samples that are of value after testing will remain the property of the CONTRACTOR.

ARTICLE 32. PROGRESS SCHEDULE

1. The CONSTRUCTION MANAGER has established the project schedule.

2. The schedule contains milestone points in calendar days for each building phase showing start and completion of each particular construction activity. These time periods shall be adhered to and will become the basis by which liquidated damages will be assessed. Activities are arranged to graphically display precedence relationships.

3. The Contractor understands and abides by CONSTRUCTION MANAGER'S directions, that if a particular construction activity can be started earlier than the date shown on schedule due to early completion of the previous construction activity or activities; the contractor will start his work earlier than scheduled and provide sufficient personnel on the job when requested by the CONSTRUCTION MANAGER. The contractor shall employ any method he deems necessary, such as, overtime or working Saturday's to complete work on schedule.

4. The schedule indicates specific construction activities for each phase of the project. The activity shown indicates when that specific activity is scheduled to be done for that particular construction process. When the construction time for that particular activity has elapsed and the work for that activity has not been completed, liquidated damages may be assessed only for completion dates or milestones expressly identified in the bid documents with their applicable daily amounts and any stated rules for concurrent delays, subject to authorized time extensions.

ARTICLE 33. MATERIALS AND WORK

1. Except as otherwise specifically stated in this Agreement, CONTRACTOR shall provide and pay for all materials, supplies, tools, equipment, labor transportation, superintendence, temporary constructions of every nature, and all other services and facilities of every nature whatsoever necessary to execute and complete the Project within specified time.

2. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted or specified, and workmanship shall be of good quality.

3. Materials shall be furnished in ample quantities and at such times as to insure uninterrupted progress of work and shall be stored properly and protected as required.

4. CONTRACTOR shall, after issuance of the Notice to Proceed by OWNER, place orders for materials and/or equipment as specified so that delivery of same may be made without delays to the work. CONTRACTOR shall, upon demand from the OWNER through the CONSTRUCTION MANAGER, furnish to the OWNER through the CONSTRUCTION MANAGER documentary evidence showing that orders have been placed.

5. OWNER reserves the right, for any neglect in not complying with the above instructions, to place orders for such materials and/or equipment as it may deem advisable in order that the work may be completed at the date specified in the Agreement, and all expenses incidental to the procuring of said materials and/or equipment shall be paid for by the CONTRACTOR.

6. No materials, supplies, or equipment for work under this Agreement shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. CONTRACTOR warrants good title to all material, supplies, and equipment installed or incorporated in work and agrees upon completion of all work to deliver premises, together with all improvements and appurtenances constructed or placed thereon by it, to OWNER free from any claims, liens, or charges. CONTRACTOR further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any work covered by this Agreement shall have any right to lien upon premises or any improvement or appurtenance thereon, except that CONTRACTOR may install metering devices or other equipment of utility companies or of political subdivisions, title to which is commonly retained by utility company or political subdivision. In the event of installation of any such metering device or equipment, CONTRACTOR shall advise OWNER as to owner thereof.

7. Nothing contained in this Article 33, however, shall defeat or impair the rights of persons furnishing material or labor under any bond given by CONTRACTOR for their protection or any rights under any law permitting such persons to look to funds due CONTRACTOR in hand of OWNER, and this provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials or labor when no formal contract is entered into for such materials or labor.

8. The title to new materials and/or equipment and attendant liability for its protection and safety, shall remain in the CONTRACTOR until incorporated in the work and accepted by the OWNER; no part of said materials and/or equipment shall be removed from its place of storage except for immediate installation in the work; and CONTRACTOR shall keep an accurate inventory of all said materials and/or equipment in a manner satisfactory to the OWNER or its authorized representative.

ARTICLE 34. INTEGRATION OF WORK

1. CONTRACTOR shall do all cutting, fitting, patching, and preparation of work as required to make its several parts come together properly, and fit it to receive or be received by work of other contractors or existing conditions showing upon, or reasonably implied by, the drawings and specifications, and shall follow all directions given by the OWNER through the CONSTRUCTION MANAGER.

2. All costs caused by defective or ill-timed work shall be borne by CONTRACTOR.

3. CONTRACTOR shall not endanger any work by cutting, excavating, or otherwise altering work and shall not cut or alter work of any other contractor without the written consent of the OWNER through the CONSTRUCTION MANAGER. CONTRACTOR shall be solely responsible for protecting existing work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

4. When modifying existing work or installing new work adjacent to existing work, CONTRACTOR shall match, as closely as conditions of site and materials will allow, the finishes, textures, and colors of the original work, refinishing existing work as required, at no additional cost to OWNER.

5. CONTRACTOR is aware that this Project may be split into several phases. If the Project is split into phases then CONTRACTOR has made allowances for any delays or damages which may arise from coordination with contractors for other phases. If any delays should arise from a contractor working on a different phase, CONTRACTOR'S sole remedy for damages, including delay damages, shall be against the contractor who caused such damage and not the OWNER. Nothing in this provision waives, alters or limits Public Contract Code section 7102 or any other nonwaivable right. CONTRACTOR shall provide access to contractors for other phases as necessary to prevent delays and damages to contractors working on other phases of construction.

ARTICLE 35. OBTAINING OF PERMITS, LICENSES AND EASEMENTS

1. Licenses, and certificates necessary for prosecution of work, shall be secured and paid for by CONTRACTOR, unless otherwise specified. All such permits, licenses, and certificates shall be delivered to the CONSTRUCTION MANAGER before demand is made for the certificate of final payment. CONTRACTOR shall, and shall require subcontractors to, maintain contractor's licenses in effect as required by law. The Owner will pay building permit fees.

2. Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by OWNER, unless otherwise specified.

3. Permits and charges for installation, and inspection thereof, of utility services by serving utilities shall be secured and paid for by OWNER.

ARTICLE 36. SURVEYS

1. Surveys to determine location of property lines and corners will be supplied by OWNER. Surveys to determine locations of construction, grading, and site work, shall be provided by OWNER (unless otherwise indicated).

ARTICLE 37. EXISTING UTILITY LINES; REMOVAL, RESTORATION

1. Pursuant to Government Code Section 4215, the OWNER assumes the responsibility for removal, relocation, and protection of utilities located on the construction site at the time of commencement of construction under this Agreement with respect to any such utility facilities which are not identified in the plans and specifications. The CONTRACTOR shall not be assessed for liquidated damages for delay in completion of the Project caused by failure of the OWNER or the utility owner to provide for removal or relocation of such utility facilities. If the CONTRACTOR, while performing work under this Agreement, discovers utility facilities not identified by the OWNER in the plans or specifications, CONTRACTOR shall immediately notify the OWNER and the utility in writing. CONTRACTOR shall be compensated according to the provisions governing changes in the work. Compensation shall include costs protected by Government Code section 4215, including locating, qualifying repair, removal or relocation and necessarily idled equipment, as applicable. These protections do not limit the broader utility responsibility expressly assumed by the OWNER in this Agreement.

2. This Article shall not be construed to preclude assessment against the CONTRACTOR for any other delays in completion of the work. Nothing in this Article shall be deemed to require the OWNER to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the construction site can be inferred from the presence of other visible facilities, such as buildings, meter junction boxes, on or adjacent to the site of the construction.

3. As part of the work to be performed, CONTRACTOR shall provide the notices and proceed in accordance with Government Code Sections 4216.2, 4216.3, and 4216.4, and pay all fees charged pursuant to Government Code Section 4216, et seq.

ARTICLE 38. WORK TO COMPLY WITH APPLICABLE LAWS AND REGULATIONS

1. CONTRACTOR shall give all notices and comply with all laws, ordinances, rules, and regulations applicable to the work as indicated and specified.

2. If CONTRACTOR observes that plans, drawings or specifications are at variance therewith, CONTRACTOR shall promptly notify OWNER through the CONSTRUCTION MANAGER in writing and any changes deemed necessary by the OWNER shall be adjusted as provided for changes in work. If CONTRACTOR performs any work which it knew, or through exercise of reasonable care should have known, to be contrary to such laws, ordinances, rules or regulations and without such notice to OWNER, CONTRACTOR shall bear all costs arising therefrom. Where plans, drawings or specifications state that materials, processes, or procedures must be approved by the Division of State Architect, State Fire Marshal, or other body or agency, CONTRACTOR shall be responsible for satisfying requirements of such bodies or agencies.

ARTICLE 39. ACCESS TO WORK

1. OWNER and its representatives shall at all times have access to work wherever it is in preparation or progress. CONTRACTOR shall provide safe and proper facilities for such access so that OWNER'S representatives may perform their functions.

ARTICLE 40. PAYMENTS BY CONTRACTOR

1. CONTRACTOR shall pay:

a. For all materials, tools, and other expendable equipment to the extent of ninety percent (90%) of cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at site of Project and balance of cost thereof not later than the 30th day following completion of that part of work in or on which such materials, tools, and equipment are incorporated or used; and
b. To each of its subcontractors, not later than the 5th day following each payment to CONTRACTOR the respective amounts allowed CONTRACTOR on account of work performed by respective subcontractor to the extent of such subcontractor's interest therein. Retention proceeds shall be distributed under Public Contract Code section 7107(d) and (e), including its seven-day deadline and permitted disputed withholding; a shorter contractual payment deadline remains applicable.

ARTICLE 41. INSPECTOR'S FIELD OFFICE

1. Inspector's Field Office will not be required.

ARTICLE 42. UTILITIES

1. All utilities, including but not limited to electricity, water, gas, and telephone used on work shall be furnished and paid for by OWNER. CONTRACTOR shall furnish and install necessary temporary distribution systems, including meters, if necessary, from distribution points to points on site where utility is necessary to carry on the work. Upon completion of work, CONTRACTOR shall remove all temporary distribution systems.

2. If Contract is for addition to existing facility, CONTRACTOR may, with written permission of OWNER, use OWNER'S existing utilities by making prearranged payments to OWNER for utilities used by CONTRACTOR for construction.

ARTICLE 43. SANITARY FACILITIES

1. The OWNER will provide access to toilet facilities.

ARTICLE 44. CLEANING UP

1. CONTRACTOR at all times shall keep work site free from debris such as waste, rubbish, and excess materials and equipment caused by this work. CONTRACTOR shall not leave debris under, in, or about the work site, but shall promptly remove same. Upon completion of work, CONTRACTOR shall clean interior and exterior of building, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected.

2. CONTRACTOR shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and remove temporary fencing, barricades, planking, sanitary facilities and similar temporary facilities from site. If CONTRACTOR fails to clean up, the OWNER shall do so and the cost thereof shall be charged to the CONTRACTOR.

ARTICLE 45. PATENTS, ROYALTIES, AND INDEMNITIES

1. The CONTRACTOR shall hold and save the OWNER and its governing board, officers, agents, and employees harmless from liability of any nature or kind, including cost and expense, for or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of this Agreement, including its use by the OWNER, unless otherwise specifically provided in the Project documents, and unless such liability arises from the sole negligence, or active negligence, or willful misconduct of the OWNER.

ARTICLE 46. GUARANTEE

1. CONTRACTOR warrants that the work (which includes any equipment furnished by CONTRACTOR as part of the materials) shall: (a) Be free from defects in workmanship and material; (b) Be free from defects in any design performed by CONTRACTOR; (c) Be new, and conform and perform to the requirements stated in the specifications and where detail requirements are not so stated, shall conform to applicable industry standards; and (d) Be suitable for the use stated in the specifications.

2. The warranty period for discovery of defective work shall commence on the date stamped on the Notice of Completion verifying County recordation and continue for the period set forth in the specifications or for one year if not so specified. If, during the warranty period, the work is not available for use due to defective work, such time of unavailability shall not be counted as part of the warranty period. The warranty period for corrected defective work shall continue for a duration equivalent to the original warranty period.

3. OWNER shall give CONTRACTOR prompt written notice after discovery of any defective work. CONTRACTOR shall correct any such defective work, as well as any damage to any other part of the work resulting from such defective work, and provide repair, replacement, or reimbursement, at its sole expense, in a manner approved by

the OWNER and with due diligence and dispatch as required to make the work ready for use by OWNER, ordinary wear and tear, unusual abuse or neglect excepted. Such corrections shall include, but not be limited to, any necessary adjustments, modifications, changes of design (unless of OWNER'S design), removal, repair, replacement or reinstallation, and shall include all necessary parts, materials, tools, equipment, transportation charges and labor as may be necessary, and cost of removal and replacement of work shall be performed at a time and in such a manner so as to minimize the disruption to OWNER'S use of the work.

4. In the event of failure of CONTRACTOR or Surety to commence and pursue with diligence said repairs or replacements within ten (10) calendar days after being notified in writing, OWNER is hereby authorized to proceed to have defects repaired or replaced and made good at expense of CONTRACTOR and Surety who hereby agree to pay costs and charges therefore immediately on demand.

5. If, in the opinion of the OWNER, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the OWNER or to prevent interruption of operations of the OWNER, the OWNER will attempt to give the written notice required by this Article. If the CONTRACTOR or Surety cannot be contacted or neither complies with the OWNER'S requirements for correction within a reasonable time as determined by the OWNER, the OWNER may, notwithstanding the provisions of this Article, proceed to make such correction or provide such attention and the costs of such correction or attention shall be charged against the CONTRACTOR and Surety. Such action by the OWNER will not relieve the CONTRACTOR and Surety of the guarantees provided in this Article or elsewhere in the Project documents.

6. This Article does not in any way limit the guarantees on any items for which a longer guarantee is specified or on any items for which a manufacturer gives a guarantee for a longer period. CONTRACTOR furnishes to OWNER all appropriate guarantee or warranty certificates upon completion of the Project or upon request by OWNER.

7. All guarantees required under this Article shall be in writing on the Guarantee form included in the Project documents.

8. CONTRACTOR shall provide to OWNER instruction manuals for all items which require same.

9. Nothing herein shall limit any other rights or remedies available to OWNER.

10. The OWNER may collect its reasonable costs and attorneys' fees in any action to enforce this Article.

ARTICLE 47. DUTY TO PROVIDE FIT WORKERS

1. CONTRACTOR and subcontractors shall at all times enforce strict discipline and good order among their employees and shall not employ on work any unfit person or anyone not skilled in work assigned to such person. It shall be the responsibility of CONTRACTOR to ensure compliance with this Article.

2. Any person in the employ of the CONTRACTOR or subcontractors whom OWNER may deem incompetent, unfit, troublesome or otherwise undesirable shall be excluded from the work site and shall not again be employed on it except with written consent of OWNER.

ARTICLE 48. WAGE RATES, TRAVEL AND SUBSISTENCE

1. Pursuant to the provisions of Article 2 (commencing at Section 1770), Chapter 1, Part 7, Division 2 of the Labor Code, the governing board of OWNER has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public work is to be performed for each craft, classification or type of worker needed for this Project from the Director of the Department of Industrial Relations ("Director.") These rates are on file with the Clerk of the OWNER'S governing board and copies will be made available to any interested party on request. CONTRACTOR shall post a copy of such wage rates at the work site.

2. Holiday and overtime work shall be paid at the rates required by the applicable DIR prevailing-wage determination and law, including any rate greater than one and one-half times the basic hourly rate. Holidays shall be defined in the Collective Bargaining Agreement applicable to each particular craft, classification or type of worker employed.

3. CONTRACTOR shall pay and shall cause to be paid each worker engaged in work on the Project not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the CONTRACTOR or any subcontractor and such workers.

4. CONTRACTOR shall pay and shall cause to be paid to each worker needed to execute the work on the Project travel and subsistence payments, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed with the Department of Industrial Relations in accordance with Labor Code section 1773.1 and the applicable DIR prevailing-wage travel and subsistence determination.

5. If during the period this bid is required to remain open, the Director of Industrial Relations determines that there has been a change in any prevailing rate of per diem wages in the locality in which this public work is to be performed, such change shall not alter the wage rates in the Notice Calling for Bids or the contract subsequently awarded. This provision does not excuse predetermined increases, corrections, or other changes required by the applicable DIR determination or law.

6. Pursuant to Labor Code Section 1775, CONTRACTOR shall as a penalty to the OWNER, forfeit not more than two hundred dollars ($200.00), as determined under Labor Code section 1775, for each calendar day, or portion thereof, for each worker paid less than the prevailing rate of per diem wages, determined by the Director, for such craft or classification in which such worker is employed for any public work done under the Agreement by CONTRACTOR or by any subcontractor under it. The Labor Commissioner shall determine the penalty under Labor Code section 1775, including its criteria, specified minimum penalties, discretion and applicable limitations. The difference between such prevailing rate of per diem wage and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing rate of per diem wage shall be paid to each worker by the CONTRACTOR.

7. If the required work is not covered by an applicable general prevailing-wage determination, the CONTRACTOR shall promptly notify the OWNER so that the appropriate determination or clarification is obtained from DIR. Workers shall be classified and paid under the applicable DIR determination; the CONTRACTOR shall not select a lower rate by analogy.

8. Per diem wages include the employer payments recognized by Labor Code section 1773.1. Required travel and subsistence payments shall be paid under that section and the applicable DIR determination. Employer-payment credits, annualization and records shall comply with Labor Code section 1773.1 and the applicable DIR determination; no credit shall exceed the amount lawfully permitted. Any annualization exemption issued before January 1, 2026 shall not be relied upon after its statutory revocation.

9. CONTRACTOR shall post at appropriate conspicuous points on the site of the Project, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned.

ARTICLE 49. HOURS OF WORK

1. As provided in Article 3 (commencing at Section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the CONTRACTOR or by any subcontractor on any subcontract under this Agreement upon the work or upon any part of the work contemplated by this Agreement shall be limited and restricted by the Agreement to eight (8) hours per day, and forty (40) hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, work performed by employees of CONTRACTOR in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day or forty (40) hours per week at not less than one and one-half times the basic rate of pay, and at any higher applicable prevailing overtime or holiday rate.

2. The CONTRACTOR shall keep and shall cause each subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by CONTRACTOR in connection with the work or any part of the work contemplated by this Agreement. The record shall be kept open at all reasonable hours to the inspection of the OWNER and to the Division of Labor Standards Enforcement, Department of Industrial Relations.

3. Pursuant to Labor Code Section 1813, the CONTRACTOR shall pay to the OWNER a penalty of Twenty-Five Dollars ($25.00) for each worker employed in the execution of this Contract by the CONTRACTOR or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Article 3 (commencing at Section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.

4. Any work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to OWNER.

ARTICLE 50. PAYROLL RECORDS

1. Pursuant to the provisions of Labor Code Section 1776, the CONTRACTOR shall keep and shall cause each subcontractor performing any portion of the work under this Agreement to 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 journeyman, apprentice, worker, or other employee employed by CONTRACTOR in connection with the work. Where required by Labor Code section 1771.4(a)(3), certified payroll shall also be furnished electronically to the Labor Commissioner at least every 30 days while work is performed and within 30 days after the final day of work. Statutory exemptions remain applicable.

2. The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the CONTRACTOR on the following basis:
   a. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.
   b. A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the OWNER, the Division of Labor Standards Enforcement of the Department of Industrial Relations.
   c. A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection upon request by the public or copies thereof made; provided, however, that a request by the public shall be made through the OWNER or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the CONTRACTOR, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the CONTRACTOR. If the OWNER receives a public request and lacks the records, it shall obtain them from the relevant contractor and make them available as required by Labor Code section 1776(b)(3). After a written records request, the contractor has ten days to comply; the OWNER shall notify DLSE of noncompliance under section 1776(b)(4).
   d. The form of certification shall be as follows:

I, _____ (Name-print), the undersigned, am _____ (position in business) with the authority to act for and on behalf of _____ (Name of business and/or CONTRACTOR), certify under penalty of perjury that the records or copies thereof submitted and consisting of _____ (description, number of pages) are the originals or true, full and correct copies of the originals which depict the payroll record(s) of the actual disbursements by way of cash, check, or whatever form to the individual or individuals named. I further certify under penalty of perjury that the employer has complied with Labor Code sections 1771, 1811 and 1815 for work performed by its employees on this public-works project.

Dated: _____ Signature: _____

3. The CONTRACTOR shall file certified payroll records with each billing as required by the Project documents and shall provide requested certified records within ten days after receipt of a written request under Labor Code section 1776. In the event that the CONTRACTOR fails to comply within ten days after receipt of written notice requesting the records under Labor Code section 1776(h), the CONTRACTOR shall, as a penalty to the OWNER, forfeit one hundred dollars ($100.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. The CONTRACTOR is not subject to a penalty assessment under Labor Code section 1776 solely because a subcontractor fails to comply with that section.

4. Except as provided in Labor Code section 1776(e) and (f), any copy of payroll records made available for inspection as copies and furnished upon request to the public by the OWNER 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 CONTRACTOR shall not be marked or obliterated. Records furnished to qualifying Taft-Hartley trust funds, joint labor-management committees and enforcement agencies shall follow the distinct disclosure and form requirements of Labor Code section 1776(e) and (f). Electronic certified payroll copies do not alone satisfy the specified trust-fund or committee requests.

5. The contractor shall inform the OWNER of the location of the payroll records enumerated under subdivision (a), including the street address, city and county, and shall, within five (5) working days, provide a written notice of a change of location and address.

6. It shall be the responsibility of the CONTRACTOR to ensure compliance with the provisions of this Article 50 and the provisions of Labor Code Section 1776 and the applicable electronic submission requirements of Labor Code section 1771.4.

ARTICLE 51. APPRENTICES

1. The CONTRACTOR and its subcontractors shall comply with Labor Code section 1777.5 for applicable apprenticeable crafts or trades, subject to its statutory exemptions, including subdivision (o). It shall be the responsibility of the CONTRACTOR to ensure compliance with this Article 51 and with Labor Code Section 1777.5 for all applicable apprenticeable crafts or trades.

2. Apprentices of any crafts or trades may be employed and, when required by Labor Code Section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

3. Every such apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he or she is employed, and shall be employed only at the work of the craft or trade to which he or she is registered.

4. Only apprentices, as defined in Section 3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at Section 3070), Division 3 of the Labor Code, are eligible to be employed on public works. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which he or she is training.

5. The CONTRACTOR and each subcontractor shall comply with the applicable apprenticeship standards and training-approval requirements under Labor Code section 1777.5. Contract-award notice to apprenticeship programs is a separate duty and shall be provided as specified below.

6. Every contractor and subcontractor shall submit the required contract-award information (DAS Form 140 or its required equivalent) to its applicable approved training program or, if not approved to train, to all applicable apprenticeship committees for the craft or trade in the project area which shall include an estimate of journeyman hours to be performed under the Agreement, the number of apprentices to be employed and the approximate dates the apprentices will be employed. The notice shall be provided within ten days after execution of the prime contract or subcontract and no later than the first day the contractor has workers employed on the public work, as required by title 8, California Code of Regulations, section 230. Form 140 is not an apprentice-dispatch request. Request apprentices separately under title 8, California Code of Regulations, section 230.1.

7. Violations of Labor Code section 1777.5 are subject to investigation, assessment and review under Labor Code section 1777.7.

a. Any debarment shall be imposed only when authorized by applicable law and after the required findings and procedures.
b. Applicable penalties under Labor Code section 1777.7 may reach $100 per full calendar day of noncompliance, or $300 per full calendar day for qualifying repeat violations within three years, subject to the statutory criteria, findings and review procedures.

8. The CONTRACTOR and all subcontractors shall comply with Labor Code Section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.

9. CONTRACTOR shall become fully acquainted with the law regarding apprentices prior to commencement of the work. Special attention is directed to Sections 1777.5, 1777.6, and 1777.7 of the Labor Code, and Title 8, California Code of Regulations, Section 200 et. seq. Questions may be directed to the Division of Apprenticeship Standards using the current contact information at https://www.dir.ca.gov/das/das_contactUS.html.

ARTICLE 52. LABOR - FIRST AID

1. The CONTRACTOR shall maintain emergency first aid treatment for CONTRACTOR'S workers on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A., Section 651 et seq.). For construction work, the CONTRACTOR shall comply with the emergency medical services, first-aid and emergency-procedure requirements of title 8, California Code of Regulations, section 1512.

ARTICLE 53. PROTECTION OF PERSONS AND PROPERTY

1. The CONTRACTOR shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of this Agreement and shall take all necessary measures and be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance by the OWNER. CONTRACTOR shall provide such heat, covering, and enclosures as are necessary to protect all work, materials, equipment, appliances, and tools against damage by weather conditions. All work shall be solely at the CONTRACTOR'S risk with the exception of damage to the work caused by "acts of God" as defined in Public Contract Code Section 7105.

2. CONTRACTOR shall take, and require subcontractors to take, all necessary precautions for safety of workers and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to the work site and provide a safe and healthful place of employment. CONTRACTOR shall furnish, erect and properly maintain at all times, as directed by OWNER through the CONSTRUCTION MANAGER or required by conditions and progress of work, all necessary safety devices, safeguards, construction canopies, signs audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction. CONTRACTOR shall designate a responsible employee, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. CONTRACTOR shall report name and position of person so designated in writing to OWNER. CONTRACTOR shall correct any violations of safety laws, standards, orders, rules, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, such violation shall be corrected immediately by the CONTRACTOR at CONTRACTOR'S expense.

3. In an emergency affecting safety of person or of work or of adjoining property, CONTRACTOR, without special instruction or authorization from OWNER, is hereby permitted to act, at its discretion, to prevent such threatened loss or injury; and CONTRACTOR shall so act if so authorized or instructed by OWNER. Any compensation claimed by CONTRACTOR on account of emergency work shall be determined by written agreement with the OWNER.

4. CONTRACTOR shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations.

5. CONTRACTOR shall (unless waived by the OWNER in writing):
   a. When performing new construction on existing sites, become informed and take into specific account the maturity of the students on the site; and perform work which may interfere with school routine before or after school hours; enclose working area with a substantial barricade; and arrange work to cause a minimum amount of inconvenience and danger to students and faculty in their regular school activities.
   b. Provide substantial barricades around any shrubs or trees indicated to be preserved.
   c. Deliver materials to building area over route designated by OWNER.
   d. When directed by OWNER, take preventative measures to eliminate objectionable dust.
   e. Enforce all instructions of OWNER regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on construction site.
   f. Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by an approved civil engineer at no cost to the OWNER.

ARTICLE 54. NON-DISCRIMINATION

1. The CONTRACTOR and its subcontractors shall comply with all applicable federal and California nondiscrimination laws, including the California Fair Employment and Housing Act and Labor Code section 1735. No listing of protected characteristics in these Project documents limits protections provided by applicable law.

ARTICLE 55. COSTS BREAKDOWN AND PERIODICAL ESTIMATES

1. CONTRACTOR shall furnish on form approved by OWNER:
   a. Within ten (10) calendar days of award of contract a detailed estimate giving complete breakdown of contract price for each project or site which shall include all subcontractor/supplier agreements showing dollar amounts of these agreements to justify the schedule of values; and
   b. A periodical itemized estimate of work done for purpose of making partial payments thereon.
   c. Within ten (10) calendar days of request of OWNER, a schedule of estimated monthly payments which shall be due CONTRACTOR under the Agreement.

2. Values employed in making up any of these schedules are subject to the OWNER'S written approval and will be used only for determining basis of partial payments and will not be considered as fixing a basis for additions to or deductions from contract price.

ARTICLE 56. CONTRACTOR CLAIMS

1. If the CONTRACTOR shall claim compensation for any damage sustained by reason of the acts of the OWNER or its agents, CONTRACTOR shall, within five (5) calendar days after sustaining of such damage, make to the OWNER through the CONSTRUCTION MANAGER a written statement of the damage sustained. On or before the 15th day of the month succeeding that in which such damage shall have been sustained the CONTRACTOR shall file with the OWNER an itemized statement of the details and amount of such damage, and unless such statement shall be made as thus required, CONTRACTOR'S claims for compensation shall be forfeited and invalidated and it shall not be entitled to consideration for payment on account of any such damage. These contractual notice requirements do not waive or impair mandatory rights, remedies or timeframes under applicable law, including Public Contract Code section 9204 when applicable, and do not extend any statutory claim-presentation or filing deadline.

ARTICLE 57. DISPUTES

1. Public Contract Code section 9204 applies to qualifying public-works contracts entered into on or after January 1, 2017. For this Project, claims shall be administered under that section to the extent applicable. Its mandatory timeframes, payment requirements and dispute-resolution rights control over inconsistent contract provisions. Public Contract Code sections 20104 through 20104.6 also apply to claims within their scope, subject to section 9204.

   For purposes of section 9204, a claim is a separate demand by a direct contractor, sent by registered or certified mail with return receipt requested, for a time extension (including relief from delay damages or penalties), money or damages arising from contract work and not otherwise expressly provided or owed, or payment of an amount disputed by the OWNER. The CONTRACTOR shall furnish reasonable documentation supporting the claim.
   The OWNER shall reasonably review a section 9204 claim and, within 45 days after receipt, issue a written statement identifying its disputed and undisputed portions. After receipt of the claim, the parties may mutually agree to extend that period. If governing-body approval is needed and the body does not meet within that period or agreed extension, the statement is due within three days after the next duly publicly noticed meeting following expiration of the period.

   Payment due on an undisputed portion of a section 9204 claim shall be processed and made within 60 days after the OWNER issues its written statement. Failure to issue a statement is governed by the statutory deemed-rejection rule stated below.

   If the CONTRACTOR disputes the response or the OWNER fails to respond within the required time, the CONTRACTOR may demand an informal settlement conference in writing sent by registered or certified mail with return receipt requested. The OWNER shall schedule the meet-and-confer conference within 30 days after receipt of the demand.

   Within 10 business days after the meet-and-confer conference concludes, if any portion remains disputed, the OWNER shall issue a written statement identifying the remaining disputed and undisputed portions. Any payment due on the undisputed portion shall be processed and made within 60 days after that statement.

   The portion remaining disputed, as identified by the CONTRACTOR in writing, shall be submitted to nonbinding mediation, with the parties sharing mediation costs equally. The parties shall agree on a mediator within 10 business days after the disputed portion is identified in writing. If they cannot agree, each shall select a mediator and those mediators shall select a qualified neutral third party; each party bears its own selecting mediator's fees and costs. Mediation includes other qualifying nonbinding neutral processes and must conform to section 9204's timeframes. If unsuccessful, the remaining dispute proceeds under otherwise applicable procedures.

   Unless otherwise agreed in writing, mediation under section 9204 excuses further mediation under section 20104.4 after litigation begins. Section 9204 does not preclude contractually required arbitration if the statutory mediation does not resolve the dispute.

Failure by the OWNER to respond or meet section 9204's time requirements results in the claim being deemed rejected in its entirety, without an adverse finding on the claim's merits or the CONTRACTOR's responsibility or qualifications. Amounts not paid when required by section 9204 bear interest at seven percent per annum.

Where a subcontractor or lower-tier subcontractor lacks privity to assert a claim directly against the OWNER, the CONTRACTOR may present a claim on its behalf. A subcontractor requesting presentation shall submit its request in writing with reasonable supporting documentation. Within 45 days after receipt, the CONTRACTOR shall notify the requesting subcontractor in writing whether it presented the claim and, if not, state the reasons.

Rights under section 9204 shall not be waived. After receipt of a claim, the parties may mutually agree in writing to waive mediation and proceed directly to a civil action or binding arbitration, as applicable. Reasonable additional change-order, claim and dispute procedures remain enforceable only insofar as they do not conflict with or impair section 9204's timeframes or procedures. This summary does not extend any statutory claim-presentation or filing deadline.

2. Except for tort claims, all claims by the CONTRACTOR for a time extension, payment of money or damages arising from work done by, or on behalf of, the CONTRACTOR pursuant to the Agreement and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or as to the amount of payment which is disputed by the OWNER of Three Hundred Seventy Five Thousand Dollars ($375,000) or less shall be subject to the settlement and arbitration provisions procedures set forth in Public Contract Code Section 20104, et seq. Those sections require that the claim be in writing, include the documents necessary to substantiate the claim, and be filed on or before the final date of payment, subject to all time limits and notice requirements for filing claims under this Agreement.
    a. For claims less than Fifty Thousand Dollars ($50,000) the OWNER shall respond in writing within 45 days of receipt of the claim or may request in writing within 30 days additional documentation which, if required, shall be provided upon mutual agreement of the OWNER and the CONTRACTOR. The OWNER'S written response to the claim shall be within 15 days after receipt of the further documentation or within a time period equivalent to that taken by the CONTRACTOR to provide the additional documentation, whichever is greater.
    b. For claims over Fifty Thousand Dollars ($50,000) and less than or equal to Three Hundred Seventy Five Thousand Dollars ($375,000), the OWNER shall respond in writing within 60 days of receipt of the claim or may request in writing within 30 days any additional documentation. If such additional documentation is required, it shall be provided upon mutual agreement of the OWNER and the CONTRACTOR. The OWNER'S written response to the claim shall be submitted to the CONTRACTOR within 30 days after receipt of further documentation or within a period of time no greater than that taken by the CONTRACTOR in producing the additional documentation, whichever is greater.
3. If the CONTRACTOR disputes the OWNER'S written response or the OWNER fails to respond within a timely fashion, the CONTRACTOR within 15 days after the response or failure to respond may demand in writing an informal conference to meet and confer for settlement of the issues in dispute, which conference shall be scheduled within 30 days for settlement of the dispute.

4. If the claim or any portion of the claim remains in dispute, the CONTRACTOR may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the CONTRACTOR submits his or her written claim until the time that the claim is denied as a result of the meet and confer process. Further, should legal action be pursued, the provisions relating to mediation and arbitration contained in Public Contract Code Section 20104.4 shall be followed.

5. In the event of a dispute between the parties as to performance of the work, the interpretation of this Agreement or payment or nonpayment for work performed or not performed, the parties shall attempt to resolve the dispute. Pending resolution of the dispute, CONTRACTOR agrees to continue the work diligently to completion. If the dispute is not resolved, CONTRACTOR agrees it will neither rescind the Agreement nor stop the progress of the work, but the dispute shall proceed under the applicable claim and dispute-resolution procedures and, where appropriate, before a court of competent jurisdiction in Tuolumne. Nothing in this paragraph requires the CONTRACTOR to delay a claim, proceeding or protective filing beyond an applicable statutory deadline or impairs mandatory rights under Public Contract Code section 9204.

ARTICLE 58. PAYMENTS

1. Each month within thirty (30) days after the OWNER receives an undisputed and properly submitted payment request, there shall be paid to CONTRACTOR a sum equal to ninety-five percent (95%) of value of work performed

and of materials delivered subject to or under the control of the OWNER and unused up to the last day of the previous month, less aggregate previous payments. The OWNER shall review payment requests promptly. An improper request shall be returned with written reasons within seven days after receipt. Late progress payments bear interest, and delay in returning an improper request reduces the interest-free payment period, as provided in Public Contract Code section 20104.50. Monthly payments shall be made only on the basis of monthly estimates that shall be prepared by CONTRACTOR on a form approved by OWNER and filed before the **20th** day of the month during which payment is to be made. Work completed as estimated shall be an estimate only and no inaccuracy or error in said estimate shall operate to release CONTRACTOR or Surety from any damages arising from such work or from enforcing each and every provision of this Agreement, and OWNER shall have the right subsequently to correct any error made in any estimate for payment.

Payment may be withheld only on grounds and in amounts authorized by applicable law and the Project documents as lawfully applied. The OWNER shall identify the basis and amount withheld and shall timely process undisputed amounts.

2. OWNER has discretion to require from the CONTRACTOR any of the following information with the application for payment: (1) certified payroll covering the period of the prior application for payment; (2) unconditional waivers and releases from subcontractors and suppliers for prior amounts actually received, using the applicable statutory form; conditional releases shall be used for amounts not yet received; (3) receipts or bills of sale for any items.

3. Construction-manager review under this paragraph shall be completed within, and shall not extend, the payment-request review, return and payment periods in Public Contract Code section 20104.50. Before payment is made hereunder, a recommendation for payment in writing shall be obtained from the CONSTRUCTION MANAGER stating that the work for which the payment is demanded has been performed in accordance with the terms of the Project documents and that the amount stated in the certificate is due under the terms of the Project documents, which certificate shall be attached to and made part of the claim made and filed with the OWNER, provided that if the CONSTRUCTION MANAGER shall, within three (3) days after written demand therefore, fail to deliver such certificate to the OWNER, the CONTRACTOR may file its claim with the OWNER without said certificate, but together with such claim shall be filed a statement that demand was made for such certificate and that the same was refused. Thereupon, the OWNER will either allow said claim as presented or shall, by an order entered on the minutes of said OWNER state the reasons for refusing to allow said claim. It is understood, moreover, that the certificate of the ENGINEER shall not be conclusive upon the OWNER, but advisory only.

4. Undisputed retention shall be released within thirty-five (35) days after recording the Notice of Completion, but in no event later than sixty (60) days after completion as defined in Public Contract Code section 7107(c). Any disputed withholding shall comply with that section. NO PAYMENT BY OWNER HEREUNDER SHALL BE INTERPRETED SO AS TO IMPLY THAT OWNER HAS INSPECTED, APPROVED, OR ACCEPTED ANY PART OF THE WORK. ACCEPTANCE WILL BE MADE ONLY BY ACTION OF THE GOVERNING BOARD OF OWNER.

5. Unless otherwise provided, on or before making request for final payment of the undisputed amount due under the Agreement, CONTRACTOR shall submit to OWNER, in writing a summary of all claims for compensation under or arising out of this Agreement which were timely filed. The acceptance by CONTRACTOR of the payment of the final amount shall constitute a waiver of all claims against OWNER under or arising out of this Agreement, except those previously made, in a timely manner and in writing, and identified by CONTRACTOR as unsettled at the time of CONTRACTOR'S final request for payment.

ARTICLE 59. CHANGES AND EXTRA WORK

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

2. Notwithstanding any other provision in the Project documents, the adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in a change order shall constitute the entire compensation and/or adjustment in the contract time due CONTRACTOR arising out of the change in the work covered by the change order unless otherwise provided in the change order. The amount of the compensation due CONTRACTOR shall be calculated pursuant to subparagraph (e) of this Article 59. The entire compensation shall not include any additional charges not set forth in subparagraph (e) and shall not include delay damages (due to processing of a change order, refusal to sign a change order) indirect, consequential, and incidental costs including any project

management costs, extended home office and field office overhead, administrative costs and profit other than those amounts authorized under subparagraph (e) of this Article 59. This limitation does not exclude damages recoverable under Public Contract Code section 7102 and does not waive any other nonwaivable right.

3. In giving instructions, the OWNER through the CONSTRUCTION MANAGER shall have authority to make minor changes in work, not involving change in cost, and not inconsistent with purposes of the Project. Changes involving cost may be authorized only by the governing board or an officer acting within a valid board delegation and applicable law. The Project documents shall identify the authorized officer and delegated limit; required board approval or ratification and applicable competitive-bidding limits remain controlling. Except in an emergency endangering life or property, no extra work or change shall proceed without a written order issued by the governing board or by an officer acting within a valid board delegation, subject to any board approval or ratification required by law. Claims for additional compensation remain subject to the applicable changes and claims procedures and nonwaivable law.

4. If the OWNER determines that work required to be done constitutes extra work outside the scope of the Agreement, the CONSTRUCTION MANAGER shall send a request for a detailed proposal to the CONTRACTOR. CONTRACTOR will respond with a detailed proposal within five (5) calendar days of receipt of the Request for Proposal. If the work is to be performed by a subcontractor, CONTRACTOR must include a bid from the subcontractor.

5. Value of any such extra work, change, or deduction shall be determined at the discretion of OWNER in one or more of the following ways:
   a. By unit prices contained in CONTRACTOR'S original bid and incorporated in the Project documents or fixed by subsequent agreement between OWNER and CONTRACTOR.
   b. By cost of material and labor and percentage for overhead and profit ("time and material"). If the value is determined by this method the following requirements shall apply:
      1) Daily Reports by CONTRACTOR:
         a) General. At the close of each working day the CONTRACTOR shall submit a daily report to the CONSTRUCTION MANAGER, on forms approved by the OWNER, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized concerning extra work items. An attempt shall be made to reconcile the report daily, and the CONSTRUCTION MANAGER and the CONTRACTOR shall sign it. In the event of disagreement, pertinent notes shall be entered by each party to explain points that cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the CONTRACTOR.
         b) Labor: The report shall show names of workers, classifications and hours worked and hourly rate. Project Superintendent expenses are not allowed.
         c) Materials: The report shall describe and list quantities of materials used and unit cost.
         d) Equipment: The report shall show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, and hourly/daily cost.
         e) Other Services and Expenditures. Other services and expenditures shall be described in such detail as the OWNER may require.
      2) Basis for Establishing Costs
         a) Labor: The costs of labor will be the actual cost for wages prevailing locally for each craft classification or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of labor classification that would increase the extra work cost will not be permitted unless the CONTRACTOR establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
         b) Materials: The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the work site in the quantities involved, plus sales tax, freight and delivery. The OWNER reserves the right to approve materials and sources of supply, or to supply materials to the CONTRACTOR if necessary for the progress of the work. No markup shall be applied to any material provided by the OWNER.
         c) Tool and Equipment Rental: No payment will be made for the use of tools that have a replacement value of $100 or less where an invoice is not provided.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental source, or distributors, at the time the work is performed. The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Necessary loading and transportation costs for equipment used on the extra work shall be included.

If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the OWNER than holding it at the work site, it shall be returned, unless the CONTRACTOR elects to keep it at the work site at no expense to the OWNER.

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

3) Other Items. The OWNER may authorize other items that may be required on the extra work. Such items include labor, services, material and equipment which are different in their nature from those required by the work and which are of a type not ordinarily available from the CONTRACTOR or any of the subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.
4) Invoices. Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If invoices or other documentation does not substantiate the request for payment, the OWNER may establish the cost of the item involved at the lowest price that was current at the time of the report.

c. The following form shall be used as applicable by the OWNER and CONTRACTOR to communicate proposed additions and deductions to the Agreement.

EXTRA CREDIT

1)	Material (attach itemized quantity and unit cost plus sales tax)	_____	_____
2)	Labor (attach itemized hours and rates)	_____	_____
	Subtotal	_____	_____
3)	If subcontractor performed work, add Subcontractor's overhead and profit to portions performed by it, not to exceed 15% of Item iii above	_____	_____
	Subtotal	_____	_____
4)	General Contractor's Overhead and Profit, not to exceed 15% of Item v if Contractor performed the work. If subcontractor per- formed the work, not to exceed 5% of Item v. of portions performed by Contractor and subcontractors, portions performed by Contractor shall not exceed 15% of Item v, and portions per- formed by Subcontractor shall not exceed 5% of Item v.	_____	_____
	Subtotal	_____	_____
5)	Bond and Liability Insurance Premium if in fact additional bonds or insurance were actually purchased, not to exceed 1% of Item vii.	_____	_____
6)	Total	_____	_____

d. IT IS EXPRESSLY UNDERSTOOD THAT THE VALUE OF SUCH EXTRA WORK OR CHANGES, AS DETERMINED BY ANY OF THE AFOREMENTIONED METHODS, EXPRESSLY INCLUDES ANY AND ALL OF CONTRACTOR'S COSTS AND EXPENSES, BOTH DIRECT AND INDIRECT, RESULTING FROM ADDITIONAL TIME REQUIRED ON THE PROJECT, OR RESULTING FROM DELAYS TO THE PROJECT. Any allocation of delay costs remains subject to Public Contract Code section 7102 and other nonwaivable law.

6. If the CONTRACTOR should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligates the OWNER to pay additional compensation to CONTRACTOR or to grant an extension of time, or constitutes a waiver of any provision in the Agreement, CONTRACTOR shall notify the OWNER, in writing, of such claim within five (5) calendar days from the date CONTRACTOR has actual or constructive notice of the factual basis supporting the claim. The notice shall state the factual basis for the claim and cite in detail the Project documents (including plans and specifications) upon which the

claim is based. The CONTRACTOR'S failure to notify the OWNER within such five-(5) day period shall be deemed a waiver and relinquishment of such a claim. If such notice were given within the specified time, the procedure for its consideration shall be as stated above in these General Conditions. These contractual notice requirements do not waive or impair mandatory rights, remedies or timeframes under applicable law, including Public Contract Code section 9204 when applicable, and do not extend any statutory claim-presentation or filing deadline.

ARTICLE 60. COMPLETION

1. The OWNER shall accept completion of the Agreement and have the Notice of Completion recorded when the entire work including punch list items shall have been completed to the satisfaction of the OWNER. The work may only be accepted as complete by action of the OWNER'S Governing Board.

2. However, the OWNER, at its sole option, may accept completion of the Agreement and have the Notice of Completion recorded when the entire work including individual portions of the work shall have been completed to the satisfaction of the OWNER, except for minor corrective items, as distinguished from incomplete items.

3. A final walk through of the Project to determine completion of the Agreement and to record the Notice of Completion shall occur only upon a valid claim by CONTRACTOR that the Project is complete except for minor corrective items. Any erroneous claims of completion by CONTRACTOR resulting in a premature walk-through shall be at CONTRACTOR'S sole cost and expense and OWNER shall make adjustments to the contract price by reducing the amount thereof to pay for any costs incurred by the OWNER due to the erroneous claims by the CONTRACTOR that the Project is complete. Minor corrective items shall be identified in the final walk through of the Project.

4. If the CONTRACTOR fails to complete the minor corrective items prior to the expiration of the thirty-five (35) day period immediately following recording of the Notice of Completion, the OWNER shall withhold from the final payment an amount not exceeding 150 percent of the disputed amount, as permitted by Public Contract Code section 7107(c). At the end of such 35-day period, if there are items remaining to be corrected, the OWNER may elect to proceed as provided in the Article entitled "Adjustments to Contract Price."

ARTICLE 61. ADJUSTMENTS TO CONTRACT PRICE

1. If CONTRACTOR defaults or neglects to carry out the work in accordance with the Project documents or fails to perform any provision thereof, OWNER may, after ten (10) days written notice to the CONTRACTOR and without prejudice to any other remedy it may have, make good such deficiencies.

2. The OWNER shall adjust the total contract price by reducing the amount thereof by the cost of making good such deficiencies. If OWNER deems it inexpedient to correct work not done in accordance with the Project documents, an equitable reduction in the contract price shall be made therefore.

ARTICLE 62. CORRECTION OF WORK

1. CONTRACTOR shall promptly remove all work identified by OWNER as failing to conform to the Project documents, whether incorporated or not. CONTRACTOR shall promptly replace and re-execute its own work to comply with Project documents without additional expense to OWNER and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

2. If CONTRACTOR does not remove such work within a reasonable time, fixed by written notice, OWNER may remove it and may store the material at CONTRACTOR'S expense. If CONTRACTOR does not pay expenses of such removal within ten (10) days' time thereafter, OWNER may, upon ten (10) days written notice, sell such materials at auction or at private sale and shall account for net proceeds thereof, after deducting all costs and expenses that should have been borne by CONTRACTOR.

ARTICLE 63. EXTENSION OF TIME - LIQUIDATED DAMAGES

1. The CONTRACTOR and OWNER hereby agree that the exact amount of damages for failure to complete the work within the time specified is extremely difficult or impossible to determine. CONTRACTOR shall be assessed the sum of Five Hundred Dollars and No Cents ($500.00) per day as liquidated damages for each and every day the work required under the Project documents remains unfinished past the time for completion, as set forth in the Agreement, and any extensions of time granted by the OWNER to the CONTRACTOR under the terms of the Project documents. The CONTRACTOR will pay to the OWNER or OWNER may retain from amounts otherwise payable to the CONTRACTOR, said amount for each day after failure to meet the requirements of the contract completion as scheduled in the Agreement. For purposes of this article, the work shall be considered "complete" in accordance with the provisions of Article 60, "COMPLETION," except that the work may be considered complete

without formal acceptance by the OWNER Governing Board so long as the Governing Board, at its next regularly scheduled meeting, accepts the work.

2. CONTRACTOR shall not be charged for liquidated damages, as set forth above, because of any delays in completion of work which are not the fault or negligence of CONTRACTOR, including but not restricted to acts of God. CONTRACTOR shall within ten (10) days of beginning of any such delay, notify OWNER in writing of causes of delay. CONTRACTOR shall provide documentation and justification to substantiate the delay and its relation to the Project's critical path. OWNER shall ascertain the facts and extent of delay and grant extension of time for completing work when, in its judgment, the findings of fact justify such an extension. The OWNER's determination shall be subject to the applicable claims and dispute-resolution procedures, including Public Contract Code section 9204 when applicable. Extension of time shall apply only to that portion of work affected by the delay, and shall not apply to other portions of work not so affected.

ARTICLE 64. PAYMENTS WITHHELD

1. All withholding under this Article is subject to Article 58, applicable notice and payment requirements, and the limits of Public Contract Code sections 7107 and 7201 where applicable; undisputed sums shall be paid when due. In addition to amount which OWNER may retain under Article entitled "COMPLETION" and Article entitled "PAYMENTS," OWNER may withhold a sufficient amount or amounts of any payment or payments otherwise due to CONTRACTOR, as in its judgment may be necessary to cover:
   a. Payments which may be past due and payable for just claims against CONTRACTOR or any subcontractors, or against and about the performance of work on the Project, including without limitation, payments made pursuant to the Article entitled "PAYMENTS BY CONTRACTOR."
   b. The cost of defective work which CONTRACTOR has not remedied.
   c. Liquidated damages assessed against CONTRACTOR.
   d. Penalties for violation of labor laws.
   e. The cost of materials ordered by the OWNER pursuant to Article 13 entitled "MATERIALS AND WORK."
   f. The cost of completion of this Agreement if there exists a reasonable doubt that this Agreement can be completed for the balance then unpaid to CONTRACTOR.
   g. Damage to another contractor.
   h. Site clean-up as provided in Article 44 entitled "CLEANING UP."
   i. Payments to indemnify, defend, or hold harmless the OWNER.
   j. Any payments due to the OWNER including but not limited to payments for failed tests, utilities or imperfections.
   k. Extra service for ENGINEER.
   l. Extra services for inspection, including but not limited to re-inspection required due to CONTRACTOR'S failed tests or installation of unapproved or defective materials and CONTRACTOR'S requests for inspection and CONTRACTOR'S failure to attend the inspection.
2. If the above grounds are in the opinion of the OWNER removed by or at the expense of CONTRACTOR, payment shall be made for amounts withheld because of them.

3. OWNER may apply such withheld amount or amounts to payment of such claims or obligations at its discretion. In so doing, OWNER shall make such payments on behalf of CONTRACTOR. If any payment is so made by OWNER, than such amount shall be considered as a payment made under contract by OWNER to CONTRACTOR and OWNER shall not be liable to CONTRACTOR for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligations. OWNER will render CONTRACTOR an accounting of such funds disbursed on behalf of CONTRACTOR.

4. As an alternative to payment of such claim or obligations, OWNER, in its sole discretion, may reduce the total contract price as provided in Article 61 entitled "ADJUSTMENTS TO CONTRACT PRICE."

ARTICLE 65. EXCISE TAXES

1. If under federal excise tax law any transaction hereunder constitutes a sale on which a federal excise tax is imposed and the sale is exempt from such excise tax because it is a sale to a state or local government for its exclusive use, the OWNER, upon request, will execute documents necessary to show (1) that the OWNER is a political subdivision of the State for the purposes of such exemption and (2) that the sale is for the exclusive use of the OWNER. No excise tax for such materials shall be included in any bid price.

ARTICLE 66. NO ASSIGNMENT

1. The CONTRACTOR shall not assign, transfer, convey, sublet or otherwise dispose of this Agreement or of its rights, title or interest in or to the same or any part thereof. If the CONTRACTOR shall assign, transfer, convey, sublet or otherwise dispose of the Agreement or its right, title or interest therein, or any part thereof, such attempted or

purported assignment, transfer, conveyance, sublease or other disposition shall be null, void and of no legal effect whatsoever; and the Agreement may, at the option of the OWNER be terminated, revoked and annulled, and the OWNER shall thereupon be relieved and discharged from any and all liability and obligations growing out of the same to the CONTRACTOR, and to its purported assignee or transferee.

ARTICLE 67. NOTICE

1. Any notice from one party to the other or otherwise under the Agreement shall be in writing and shall be dated and signed by party giving such notice or by a duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in one of the following manners:
   a. If notice is given to OWNER, by personal delivery thereof to OWNER or by depositing same in United States mail, enclosed in a sealed envelope addressed to OWNER, and sent by registered or certified mail with postage prepaid;
   b. If notice is given to CONTRACTOR by personal delivery thereof to said CONTRACTOR or to CONTRACTOR'S superintendent at site of Project, or by depositing same in United States mail, enclosed in a sealed envelope addressed to said CONTRACTOR at its regular place of business or at such address as may have been established for the conduct of work under this Agreement, and sent by registered or certified mail with postage prepaid;
   c. If notice is given to surety or other persons by personal delivery to such surety or other person or by depositing same in United States mail, enclosed in a sealed envelope, addressed to such surety or person at the address of such surety or person last communicated by surety or other person to party giving notice, and sent by registered or certified mail with postage prepaid.

ARTICLE 68. NO WAIVER

1. The failure of the OWNER in any one or more instances to insist upon strict performance of any of the terms of this Agreement or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion.

ARTICLE 69. NON-UTILIZATION OF ASBESTOS MATERIAL

1. The CONTRACTOR will be required to execute and submit the Certification Regarding Non-Asbestos Containing Materials.

2. Should asbestos containing materials be installed by the CONTRACTOR in violation of this certification, or if removal of asbestos containing materials is part of the Project, decontamination and removals will meet the following criteria:
   a. Asbestos response work shall be designed and supervised by persons holding the discipline-specific training, accreditation and California qualifications required for the work. The OWNER shall identify the responsible asbestos professional before the work proceeds.
   b. The asbestos contractor shall hold the applicable California contractor license and asbestos qualifications, use properly trained and accredited personnel, and obtain Cal/OSHA registration where required by title 8, California Code of Regulations, section 341.6. Work shall comply with section 1529 and applicable agency notification requirements.
   c. The asbestos ENGINEER shall be chosen and approved by the OWNER who shall have sole discretion and final determination in this matter.
   d. Asbestos response work shall meet the applicable visual-inspection, air-clearance, laboratory and documentation requirements, including 40 CFR section 763.90(i) for covered school response actions, before acceptance or reoccupancy. Professional acceptance shall not substitute for required regulatory clearance.
3. CONTRACTOR shall bear correction costs caused by its prohibited installation or other breach. Costs of abatement expressly included in the awarded scope remain included in the contract price. Costs and time associated with other existing or concealed asbestos shall be addressed under applicable changes, site-condition and claims procedures and nonwaivable law.

4. Hold Harmless: Interface of work for the Project with work containing asbestos shall be executed by the CONTRACTOR at his/her risk and at his/her discretion with full knowledge of the currently accepted standards, hazards, risks and liabilities associated with asbestos work and asbestos containing products. By execution of the Agreement, the CONTRACTOR acknowledges the above and agrees to hold harmless the OWNER, its Governing Board, employees, agents, CONSTRUCTION MANAGER and OWNER'S ENGINEERING ENGINEER(S), and assigns for asbestos-related liability to the extent lawfully attributable to the CONTRACTOR's acts or omissions, subject to Civil Code section 2782. This provision does not require indemnity for the OWNER's active negligence or any liability that applicable law prohibits transferring. The CONTRACTOR further agrees to instruct his/her employees with respect to the above mentioned standards, hazards, risks, and liabilities.

ARTICLE 70. CONSTRUCTION MANAGER STATUS

1. The Construction Manager will provide single point of contact for all prime contractors and will provide the following functions with respect to management:
    a. Maintain a competent full-time supervisory staff to coordinate and provide general direction of the work and progress of the trade contractors on the project.
    b. Review the work as it is being performed, until final completion and acceptance by the Owner, to assure that the materials furnished and work performed are in accordance with working drawings and specifications.
    c. Establish on-site organization and lines of authority in order to carry out the overall plans of the Construction Team.
    d. Establish procedures for coordination among the Owner, Engineer(s), trade contractors and Construction Manager with respect to all aspects of the project and implement such procedures.
    e. In cooperation with the Engineer(s), he will establish and implement procedures to be followed for expediting and processing all shop drawings, catalogs, and other project papers.
    f. Review and process all applications for payment by involved trade contractors and material suppliers in accordance with the terms of the contract.
    g. Make recommendations for and process requests for changes in the work and maintain records of change orders.
    h. Furnish either with his own forces or others all General Conditions items as required.
    i. Perform portions of the work with his own forces if requested by the Owner to do so.
    j. Schedule and conduct job meetings to ensure the orderly progress of the work.
    k. He will refer all questions relative to interpretation of design intent to the Engineer(s).

END OF GENERAL CONDITIONS

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OWNER: TWAIN HARTE SCHOOL

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22 – CONSTRUCTION MANAGER'S MANUAL

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

PREFACE

This manual will be applicable to this project. Forms have been prepared for this project and the Contractor shall submit the appropriate form for RFI's, Submittals, etc.

The CONSTRUCTION MANAGER will provide phase services related to interpretation of the technical documents, submittals, and observation of construction quality. Infinity Communications and Compliance, Inc. will provide overall coordination and specific services related to contract administration.

As a number of outside individuals, i.e., CONTRACTORS, SUBCONTRACTORS, and their FIELD REPRESENTATIVES are introduced to the construction program, it is necessary to establish a common tool to be used by all personnel associated with the construction program. In order to avoid confusion, and lack of direction, this manual has been prepared to clarify areas of responsibilities, lines of communication between the various parties, and to establish procedures that will be used for all aspects of the construction program as it relates to activities between the CONTRACTOR, OWNER, and CM.

This manual is intended to supplement the Contract Documents.

Issues concerning the execution and scope of work shall be addressed to the CM.

It is the purpose of this manual to supplement the Contract Documents prepared by the CONSTRUCTION MANAGER.

ARTICLE I - ROLE OF THE CONSTRUCTION MANAGER
The **OWNER** intends to appoint a Construction Manager to provide construction management services for this project.

By using this method of construction there is no general contractor. Instead, there are numerous prime contractors who are managed by the Construction Manager (CM).

Among other responsibilities, the Construction Manager, will perform the following services for the OWNER: Twain Harte School

1. Issue bid packages, conduct pre-bid conferences and receive bids.
2. Conduct pre-construction meetings
3. Prepare Owner/Contractor agreements.
4. Receive and process contractor's agreements, insurance certificates and bonds.
5. Receive Certificates of Safety.
6. Maintain records and correspondence.
7. Receive and process contractor's submittals.
8. Process all requests for Certified Payroll Reports.
9. Receive and process contractors' daily reports.
10. Receive, review and process verified reports prepared by the contractors.
11. Receive keys, manuals, guarantees, as-built record documents and maintenance materials for the OWNER.
12. Receive and process requests for information, change requests, time extensions, costs proposals and change orders.
13. Review, process and make recommendations for payments for work performed.
14. Coordinate the work of all contractors.
15. Prepare construction schedule and monitor contractor's performance with respect to schedule.
16. Conduct coordination and special meetings. Prepare and distribute minutes.
17. Evaluate contractor's performance and adherence to contract documents.
18. Coordinate the services of inspectors, special consultants and testing laboratories.
19. Prepare preliminary punch lists and coordinate corrective work.

ARTICLE 2 – BID SCOPE
See attached individual Bid Documents (specifications and drawings) for applicable Bid Scope.

ARTICLE 3 – SUPERVISION
3.1 CM Supervision

The CM will provide a Project Superintendent to monitor Contractor performance and quality of work.

ARTICLE 4 – CONTRACT ADMINISTRATION

4.1 Contract Agreements

Contract agreements between the OWNER and each contractor will be prepared by the CM and forwarded to the contractor for signature. One (1) original signed contracts shall be returned to the CM for processing for countersignature by the OWNER. One fully executed contract agreement will be returned to the contractor once acceptable bonds and insurance certificates are received.

4.2 Insurance

Certificates of Insurance: Certificates of insurance **MUST** be provided as stated in the General Conditions. All policies must be endorsed to name the SCHOOL DISTRICT, THEIR OFFICERS, AGENTS, EMPLOYEES, AND CONSULTANTS as additional insured. The insurance certificates shall provide for thirty- (30) days' written notice of cancellation. **Insurance must remain in effect until retention money has been released**. All insurance certificates are to be sent to the CM, not the OWNER.

The Contractor's certificate regarding workers compensation shall be signed by the contractor and forwarded to the CM prior to the start of work.

Contractor's certificates of insurance must be kept current at all times during construction and during the warranty period.

Fire insurance (all risks) for "Prime Contractors" will be applied and paid for by the OWNER. The OWNER'S "Course of Construction" Insurance will cover only construction improvement items incorporated in the project or suitably stored onsite. Vendor/Supplier agrees to store and protect from all causes of loss the products/materials/supplies sold to the OWNER. In addition, the vendor agrees to purchase and maintain in full force for the duration of the job proper insurance coverages, which will indemnify Infinity Communications and Compliance, Inc., the individual school districts where the work is being performed, and/or the School District for loss from any and all destruction to such products/materials/supplies. A certificate of insurance indicating above coverage shall be submitted to the CM.

4.3 Bonds

(See General Conditions) Performance and payment bonds must be executed on original (not a FAX copy). See forms in project manual.

4.4 Asbestos Certification

The Contractor's certificate regarding use of asbestos containing materials will be signed and submitted to the CM at the completion of the work, and prior to the submission of the final payment invoice.

4.5 Safety Program Certifications

The required Safety Program Certification shall be signed and sent to the CM prior to the start of work. The Safety Program Certification form signifies that the contractor has a safety program in place that conforms to Labor Code section 6401.7 and title 8, California Code of Regulations, sections 1509 and 3203 and the current California/Federal OSHA regulations; and that the contractor will actively and aggressively comply with those regulations, as well as their own safety program/policy. (See Form H, Safety Program Certification, in this CM Manual.)

4.6 Correspondence

The CM has been established as the clearinghouse for all communications. When a piece of correspondence is received from any party, the CM will route it to the proper person for action. Correspondence should be addressed to:

Construction Manager: **To Be Announced**

Contractor: All correspondence from the contractor will be directed to the CM.

Several different reports and/or forms are required to be completed throughout the duration of the construction program. In order to confirm that all parties are aware of the reports and frequency of reports, including procedures, methods and duties of affected parties, the following list is provided and required forms are appended to this manual.

4.7 Project Directory

Owner's Representative: Twain Harte School
18815 Manzanita Dr.
Twain Harte, CA 95383
Contact: 0045 1

Construction Managers' Representative: To Be Announced

4.8 Submittals

4.8.1 Shop Drawings and Submittals

Shop Drawing & Submittal: Submittals are drawings, illustrations, diagrams, schedules, performance charts, brochures, and other data which are prepared by the contractor, manufacturer, supplier, or distributor and which illustrates a portion of the work.

The CM as noted in the General Conditions must receive submittals. In general, all submittals must be received within ten (10) days of the Notice to Proceed. Failure to send submittals within the allotted time will affect the completion and liquidated damages attributable to said delay may be assessed.
One (1) original signature Submittal Identification Form (P905) must be completed and submitted with your submittals.

Submittal Routing: The Contractor shall assure that all submittals are submitted through him and not directly by the subcontractor or supplier. All submittals through the contractor shall bear the contractor's signature on the submittal identification form certifying that he/she has checked them and the submittals conform to the Contract Documents before submission to the CM.

Submittal Transmittals: The contractor shall submit shop drawings, product data, and samples directly to the CM. The submittal shall include a transmittal form and submittal identification form with a **complete description, specification section, and drawing references, and the items included**.
Review: The CONSTRUCTION MANAGER will complete his review and return the submittals directly to the Contractor.

Non-Conforming Shop Drawings: Shop drawings which are not submitted in accordance with the requirements stated, for example submittal of prints without a reproducible, submittal of a drawing which does not contain the contractor's certification that he has checked same, or submittals which are not properly identified will be returned immediately to the CONTRACTOR by the CM with the request to comply with required procedures.

4.8.2 Substitutions

In addition to the requirements of the contract documents and the normal submittal procedure, all requests for substitutions shall be accompanied by Substitution Warranty form "P".

4.8.3 State/Local Approvals

Required agency submittals shall be prepared and submitted sufficiently early for approval before the affected work. For DSA work, the design professional in responsible charge shall perform required review and submissions. The CM may coordinate routing but shall not replace that statutory responsibility. No affected installation shall proceed before required approval.

4.8.4 Apprenticeship, Wages and Certified Payroll

4.8.4.1 Apprenticeship

Apprentices of any crafts or trades may be employed, and when required by Labor Code 1777.5 shall be employed, provided they are properly indentured to the Contractor in full compliance with the provisions of the Labor Code. Refer to General Conditions Article 51.

Each Contractor will comply with the provisions of Labor Code 1777.5

4.8.4.2 Wages

A payment of prevailing wages to all workers is required on this project. Refer to General Conditions Articles 48 and 49, and the Notice to Contractors Calling for Bids for specific conditions.

4.8.4.3 Certified Payroll

In accordance with the General Conditions, a Certified Payroll Report and a "Statement of Compliance" shall be prepared weekly and shall be submitted to the CM. Prime contractors are responsible for the submission of certified payrolls by all of their subcontractors. Payroll reports shall be submitted each week once work has started for each bid package until completion of bid package scope of work.

4.8.4.4 Trade Classifications

The contractor shall submit a list of trades to be employed for work on the project in order to be compliance with wage posting requirements. The list shall be submitted to the CM on Form F (P-908) within 5 days of the award of the work.
If other trades are required after the list has been submitted, the CM must be advised in writing on Form K (P-908) no less than 7 days prior to the start of that added trade.
Contractors must require their subcontractors to submit trade classification forms and are responsible to forward them to the **CM** within the aforementioned time limits.

4.8.5 Contractors Daily Report

Each contractor is required to prepare a daily report (Form D (P-903)). The contractor's daily report shall indicate the manpower present on-site, and the work performed. Problems or delays should be clearly noted along with action taken. If extra work has been performed it should be noted. (Warning: There will be no payment for Work claimed to be outside of the scope of contract that is performed without the expressed advanced approval by OWNER.) Each day the contractor shall fax the Form D (P-903) to the Construction Manager's Bakersfield Office at (661) 716-1840. If no fax machine is available to the Contractor's field crews, then the daily reports can be sent once a week on the Friday of each week.

4.8.6 Cost Breakdown

Pursuant to General Conditions, the contractor will submit to the CM a detailed estimate giving a complete cost breakdown of the contract price and a schedule of estimated monthly payments within ten (10) days of the award of the contract.

4.8.7 Extra Materials

Extra materials for OWNER'S use specified to be provided in the contract documents shall be delivered to a place designated by the CM at the completion of the work.

Extra materials shall be described on a transmittal and packaged in a verifiable manner so that the CM can receive extra materials on the OWNER'S behalf. All articles must be clearly labeled describing contents and building location.

4.8.8 Record Documents

The contractor is responsible to always keep detailed record information on the plans and to transfer such as-built information to the master record set kept in the CM's office. The master record set shall be updated on a regular basis as needed to keep up with overall construction activities, but in no event longer than every two (2) weeks and shall be signed by a principal individual of the Contractor at the end of the project. Record drawings shall be kept current as required. Any payment consequence shall be limited to withholding authorized by law and Article 58, and shall not delay review or payment of undisputed amounts otherwise due.

The transferring of record information from blue line construction drawing prints to sepia mylar will be by others.

All Operations and Maintenance Manuals, brochures, warranties, etc., as required by Project Manual shall be submitted to the CM.

4.8.9 Guarantee

Pursuant to General Conditions, the contractor shall submit to the CM a guarantee for the work in accordance with the contract documents, for the time stipulated in the contract documents, on the form provided herein.

The completed guarantee form shall be delivered to the CM at the completion of work, prior to submitting application for final payment.

4.8.10 Maintenance Manuals

The contractor shall deliver 3 copies of the Maintenance Manuals required by the contract documents at least ten (10) days prior to completion of his work. Maintenance Manuals shall conform to the requirements of General Conditions and the applicable technical specifications.

4.9 Changes and Extra Work

4.9.1 Requests for Information

The contract documents are intended to be complimentary and what is shown in or on one part of the documents is to be understood as being shown on all parts of the documents. Drawings and specifications are intended to agree with one another.

In some cases, there may be conflicts with the contract documents or situations where the CONSTRUCTION MANAGER'S intent needs to be clarified. It is the responsibility of the contractor to bring these items to the CM and request an interpretation/clarification in writing.

The attached Request for Information form – Form E (P-904 (RFI)) shall be used in all cases where the contractor needs the Construction Manager to provide additional information. The RFI form shall be filled out and submitted to the CM for processing.

The CONSTRUCTION MANAGER'S response will be either noted in the reply portion of the RFI or in the form of a supplemental instruction.

4.9.2 Supplemental Instructions

Upon occasion the CONSTRUCTION MANAGER will need to clarify the contract documents or request changes in the scope of the work.

The CONSTRUCTION MANAGER will issue supplemental instructions to make minor changes in the work that are not intended to effect cost. These supplemental instructions will be forwarded for distribution to the contractor(s) affected.

4.9.3 Proposal Requests/Cost Proposals

The CONSTRUCTION MANAGER will issue proposal requests to make changes in the scope of the work. The CM will distribute proposal requests to the affected contractors.

Within seven (7) days, the contractor will submit a cost proposal for changes requested to the Construction Manager. The cost proposal shall include a detailed cost breakdown of all required labor, equipment, and materials to be added and a detailed cost breakdown of all credits for deleted items. If additional time is required, it should be indicated on the cost proposal.

4.9.4 Time Extensions

The General Conditions, Article 63, provides for time extensions under certain circumstances.

All requests for time extensions shall be submitted to the CM within ten (10) calendar days of the beginning of any delay. The request shall indicate name of contractor and Bid Package No., nature of delay, work that is being delayed, requested extension of time in days, and date of delay.

If the request for time extension is accepted, the contract time shall be adjusted by a change order.

4.10 Payments

Schedule of Values: Form P902 shall be completed within 15-days after issuance of contract by all prime contractors as noted and itemized according to the following minimum requirements as applicable to each bid package scope of work. Labor and materials shall be separate line items for each phase of work. Bonds, shop drawings, rough in and finish work, materials and mobilization shall be separate line items as applicable. The more your schedule of value is broken down, the easier it will be to determine quantities and therefore be closer to actual work done. Values shall be assigned to each line item with total at bottom of column "C". For continuity, these forms must be used; NO ALTERNATE pay request form will be allowed or accepted.

Columns A, B, & C are to be Filled Out: Contractor is to assign a value to each item. Submit it to the CM for approval on the values. Once approved, the values shall not be changed and will be used as the basis for subsequent payments.

Each month, on or before the 18th day of the month, prior to the date that monthly payment applications are to be submitted, the contractor and the CM shall meet to review the contractor's periodic estimate for partial payment. Prior to the meeting the contractor shall prepare a rough draft of their pay request for the month. The contractor shall be prepared to explain the progress of work completed and provide any necessary documentation. If the application for payment includes a request to be paid for stored materials the contractor shall arrange for proper storage and inspection in accordance with the OWNER'S requirements.

After the rough draft of the contractor's periodic estimate for partial payment has been reviewed by the CM and project inspector, the contractor shall prepare the formal billing and submit 3 copies, all with 'wet" signatures, to the CM on Forms P901 and P902 by the 20th of the month.

Improper progress payment requests shall be returned with written reasons as soon as practicable and no later than seven days after receipt, consistently with General Conditions Article 58 and Public Contract Code section 20104.50. Change orders must be fully approved by the OWNER before any billing for them can be processed.

All requested percentages of completion are subject to the approval of the OWNER and the CM.

Payments may be withheld for reasons enumerated in the General Conditions, and the following:

1. Failure to perform progressive or final cleanup of contractors' debris pursuant to the terms of the contract documents.

2. Failure to provide required certified payroll records, subject to the applicable notice, production, penalty and withholding procedures in Labor **Code** sections 1771.4 and **1776**.

3. Failure to maintain accurate record drawings and/or failure to transfer to record information to the master set.

4. Failure to provide current certificates of insurance.

5. Supplemental Instructions must be acknowledged by Contractor and returned to the CM within five (5) days.

The OWNER shall pay undisputed, properly submitted progress payment requests within thirty days after receipt, subject to Public Contract Code section 20104.50 and General Conditions Article 58. CM or OWNER approval shall not restart that period.

Contractors shall be responsible to pay their own suppliers and vendors directly. The OWNER will not issue joint checks.

After all work is completed and all requirements for issuance of final payment and contract closeout have been met, the contractor shall submit an invoice for final payment. A completed and signed Conditional Waiver and Release Upon Final Payment shall accompany the final payment invoice.

Upon receipt of final payment, the contractor shall sign an Unconditional Waiver and Release Upon Final Payment.

4.11 Subcontractors

Pursuant to General Conditions each Contractor is responsible to ensure that their subcontractors adhere to the requirements of the specifications and this manual, and will collect and forward all forms and submittals to the CM. Contractors must advise the CM, in writing, of any subcontractor under contract with them within 5 days of award of the subcontract.

ARTICLE 5 – COORDINATION OF THE WORK

It is the responsibility of the CM to provide administrative, management and related services as needed to coordinate work of the contractors and the OWNER.

It is the responsibility of the Prime Contractor to coordinate the work and advise his superintendent daily of the work to be done.

ARTICLE 6 – SCHEDULE

The Construction Manager has prepared a progress schedule for the purpose of graphically depicting the progress of the work.

The **Start Date** of construction as shown on the schedule will be adjusted to correspond with the Notice to Proceed. All Bid Package(s) start dates will be adjusted accordingly. However, the duration time as shown on schedule for each Bid Package will remain unchanged.

The schedule contains milestone points in calendar days for each building project phase showing start and completion of each construction activity. These time periods shall be adhered to and will become the basis by which liquidated damages will be assessed. Activities are arranged to graphically display precedence relationships.

The contractor understands and abides by CM directions, that if a particular construction activity can be started earlier than the date shown on schedule due to early completion of the previous construction activity or activities, the contractor will start his work earlier than scheduled and provide sufficient personnel on the job when requested by the CM. The contractor shall employ any method he deems necessary, such as, overtime or working Saturdays to complete work on schedule. Overtime and working on Saturdays shall be coordinated with the District.

If work as scheduled is not completed within the allotted time noted on the project schedule, the prime contractor for that portion of the work will be assessed liquidated damages in the amount as noted in the Contract Documents per calendar day until that portion of the work is completed.

The schedule indicates specific construction activities for each phase of the project. The activity shown indicates when that specific activity is scheduled to be done for that construction process. When the construction time for that activity has elapsed and the work for that activity has not been completed, liquidated damages may be assessed only for completion dates or milestones expressly identified in the bid documents with their applicable daily amounts and any stated rules for concurrent delays, subject to authorized time extensions.

Each individual project if multiple projects are included in one bid may be scheduled to start on different dates. All contractors must continuously man each specific building process under his scope of work until that portion of the work is completed for each project and/or area so that work of other trades can proceed according to schedule.

6.1 Progress Evaluation

The CM will monitor the progress of the work on a regular basis.

The contractor and the CM will meet to review schedule progress for the previous month and to review the contractor's plan for performing work pursuant to the schedule over the next month. This review will take place at the project meeting.

If the contractor's progress is unsatisfactory or if the other conditions would warrant it, the specific contractor and CM will meet separately to discuss progress and establish a plan of “attack”.

ARTICLE 7 – MEETINGS

7.1 Pre-Construction Meetings

Prior to the start of the work the CM will conduct a pre-construction meeting. At this meeting contractors will be notified of time and day of the week that the project meeting will be held.

During the pre-construction meeting the following items will be reviewed and discussed:

1. Use of facilities

2. Insurance
3. Bonds
4. Asbestos Certification
5. Safety
6. Correspondence Procedures
7. Shop Drawing/Submittal procedures.
8. Changes in the work
9. Application and Certificate for payment and final payment procedures
10. Schedule
11. Meetings
12. Quality Control
13. Cleaning up
14. Owner Rules of Conduct
15. Contractor's Supervision
16. Contact Person's List
17. Exact location of racks, raceways, power receptacles, and workstation outlets.

7.2 Progress Meetings
Contractors will be notified of the time and place of any Progress Meetings required to coordinate the work.

7.3 Meeting Minutes
The CM will prepare and distribute minutes from each meeting.

ARTICLE 8 – QUALITY CONTROL
8.1 Construction Manager's Responsibility
Pursuant to the terms of the General Conditions, the CONSTRUCTION MANAGER shall be the OWNER'S representative during the construction period and shall observe the progress and quality of the work on behalf of the OWNER. The CONSTRUCTION MANAGER has the authority to stop work whenever stoppage may be necessary, in the CONSTRUCTION MANAGER'S responsible opinion, to ensure the proper execution of the work.

The CONSTRUCTION MANAGER and any representative of the OWNER always have the right of access to the work. It is the contractor's responsibility to ensure that facilities for safe access to the work are provided.

8.2 Non-Responsibility
Neither the OWNER nor the CM shall be responsible for the construction means, methods, techniques, sequences, or procedures employed by the contractors in the performance of their work, nor shall they be responsible for the failure of any contractor to carry out work in accordance with the Contract Documents.

8.3 Required Tests and Inspections
Pursuant to the General Conditions and applicable Specifications it is the responsibility of the contractor to give notice of its readiness for a test, observation or inspection.

The contractor shall notify the CM when it is ready for an inspection, test, or observation, and shall advise the CM that the request has been made.

8.4 Contractor's Supervision
Each Contractor shall designate a competent Superintendent who shall oversee the work of the Contractor.

The Contractor's Superintendent shall be familiar with the Contract Documents and shall be the person to represent the Contractor in his absence.

All instructions or directions given to the Contractors Superintendent shall be binding on the Contractor.

8.5 Rejection
In cases where any portion of the work is found to be in non-compliance with the Contract Documents, the following procedure shall be implemented.

1. The CONSTRUCTION MANAGER shall notify the Contractor that work does not comply along with pertinent details concerning the non-compliance.
2. The CM shall review the facts and determine if a formal rejection notice is to be issued.

3. If necessary, the CM shall prepare a Notice of Non-Compliance and distribute it to the appropriate contractors. The notice shall specify the time in which corrections must be made.

It is the responsibility of the contractor to make corrections to any rejected work and repair any work of other contractors that is damaged while making corrections, at its own expense. No time extension shall be granted for delays caused by the rejection of non-conforming work.

8.6 Preliminary Punch Lists

When the contractor has completed all work under the scope of the contract, he shall notify the CM that he is ready for a preliminary final inspection.

The contractor and the CM shall observe the completed work and prepare a preliminary punch list. The corrective work indicated on the preliminary punch list will be completed before the contractor requests a final inspection by the CONSTRUCTION MANAGER.

The preliminary punch list is not to be construed as a complete and exhaustive list of all items requiring the contractors' attention or acceptance of unacceptable work nor shall it take the place of the CONSTRUCTION MANAGER'S and OWNER'S final inspection.

ARTICLE 9 – CLEAN UP

9.1 Progressive Cleaning

Each day the Contractor shall perform progressive cleaning to keep the premises free of debris such as waste, rubbish generated by its own force and excess materials or equipment.

In no case shall the Contractor permit debris to pile up or become a hazard to persons or property. Each Contractor is responsible for maintaining their portion of the work in a clean condition and shall pick up and remove all trash generated by their forces (See General Conditions). Clean-up not done in a timely manner, when requested by the CM, will be arranged to be done by the OWNER and back charged to the responsible Contractor.

9.2 Contractor's Final Cleaning

Upon completion of the work the Contractor shall thoroughly clean all the Contractor's installed work as well as adjacent work that is not clean due to work being performed by the Contractor. The Contractor shall also remove any temporary facilities, left over materials, tools and equipment that are not designated to remain.

ARTICLE 10 – RULES OF CONDUCT

The following rules will be always observed while working on the project:

1. Sleeved shirts and long pants will be always worn
2. Appropriate footwear is to be always worn
3. No swearing, loud or offensive language
4. No horseplay or fighting
5. No cat calls, whistles or other gestures that can be considered offensive
6. No radios, tape, record, or CD players
7. No drinking of alcohol
8. No drugs
9. No reckless or unsafe operation of motorized vehicles
10. No loitering
11. No soliciting
12. No smoking
13. No using finished toilet rooms (unless authorized by OWNER).
14. No firearms or other weapons will be permitted on the site

Project Schedule

The following are the anticipated project milestones

Bid Date	December 14, 2026, 12:00pm
Notice of Intent to Award	TBD
Award of Contract	TBD
Contractor's Notice to Proceed	TBD (dependent on E-rate funding)
Contractor's Submittals Due	10 Calendar Days from Notice to Proceed date
Project Duration	120 Calendar Days
Project Completion	No later than September 30, 2028 unless mutually agreed upon

INSTRUCTIONS FOR COMPLETING FORMS P901 AND P902

COMPLETING ICC FORM P902

Show prime contractor name and Bid Package number in place noted, in upper left-hand corner.

1. **Columns A, B, & C** - As shown on approved Schedule Values.
2. **Column D** - Column G from previous Application and Certificates for Payment.
3. **Column E** - Value of work completed during this billing period.
4. **Column F** - Value of approved materials presently stored for which payment is being requested. (Submit material invoices to substantiate).
5. **Column G** - Total of Columns D, E, and F. Divide Column G by Column C and enter percentage of completion.
6. **Column H** - Column C minus Column G.
7. **Column I** - Enter total retainage.
8. **Change Orders** - *AFTER OWNER APPROVAL ONLY!!!* - Enter as separate line items in Column B and list the value amount in Column C.
9. Complete P902 and fax to the jobsite (or deliver) for the Construction Manager's Superintendent and Owner's Representative approval on or before the 18th of each month. You will be advised of acceptance or corrections. Complete and submit two (2) wet signature originals, P901 and P902, "Application and Certificate for payment" and forward to Infinity Communications and Compliance, Inc.'s office by the 20th of each month.

The monthly submission date is an administrative scheduling deadline. Payment requests shall be reviewed, returned when improper, and paid within the periods stated in General Conditions Article 58 and Public Contract Code section 20104.50. The monthly cutoff shall not extend those periods.

COMPLETING ICC FORM P901

1. Use the appropriate Schools Legal Service Document.
2. Complete with information form P902; sign and submit two wet signature originals P901 and P902 to the Construction Manager by the 20th of each month. (See also Article 4.10 of CM Manual).
3. After review of payment applications by the Construction Manager, the Construction Manager signs and forwards to the Owner's Representative for review and recommendation for payment.
4. **Change Orders - *AFTER OWNER APPROVAL ONLY!!!*** - List Owner approved change order number, date approved, and amount in the appropriate column. Once listed, the totals are carried to the next billing as change orders approved in previous months by Owner columns. The net change by Change Order amount should be transferred to Line 2 of the P901.

FORM C
APPLICATION AND CERTIFICATE FOR PAYMENT

Form P-901 Page 1 of Pages

TO: Twain Harte School
18815 Manzanita Dr.
Twain Harte, CA 95383

FROM:
(CONTRACTOR)

PROJECT: Structured Cabling

LOCATION: Twain Harte, CA

SUBMIT APPLICATION TO:
.
CONSTRUCTION MANAGEMENT

PAY APPLICATION NO:
APPLICATION DATE:
PERIOD FROM:
PERIOD TO:
CONTRACT DATE:
CONTRACT NO: 1
PROJECT NO: 0045-27C.1

CONTRACTOR'S APPLICATION FOR PAYMENT

CHANGE ORDERS SUMMARY		ADDITIONS	DEDUCTIONS
Change Orders approved in Previous Months By Owner Total			
Number:	Date Approved:	Approved This Month	
NET CHANGE by change orders			

Application is made for Payment, as shown below, in connection with the Contract. Contractor's Schedule of Values is attached.

1. ORIGINAL CONTRACT SUM……..…….. $
2. Net Change by Change Orders…….. $
3. CONTRACT SUM TO DATE (Line 1 ± 2)……. $
4. TOTAL COMPLETED & STORED TO DATE:…….. $
5. RETAINAGE:
   a. 5% of Completed Work……. $
   b. 5% of Stored Material……. $
6. TOTAL EARNED LESS RETAINAGE (Line 4 – 5)…….. $
7. LESS PREVIOUS CERTIFIED PAYMENTS…… $
   (Line 12 from prior certificates)
8. CURRENT PAYMENT DUE…… $

The Contractor hereby certifies that to the best of the Contractor's knowledge, information and belief, the Work covered by this Application for Payment had been completed in accordance with the Contract documents, that all amounts have been paid by the Contractor for Work which previous Certificates for Payment were issued and payments received for the Owner, and that current payment shown herein is now due.

CONTRACTOR:
BY: _____ DATE: _____

_____ _____

_____ _____

CONSTRUCTION MANAGER'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief, the Work has progressed as indicated, the quality of the work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

9. CONTRACTOR'S REQUEST FOR PAYMENT…..…….…. $
   (Line 8 above)
10. LESS: WITHHOLDING AND RETENTION OF PAYMENT AND ASSESSMENTS AGAINST THE CONTRACTOR…..…… $
11. LESS: OWNER'S CLAIMS AGAINST THE CONTRACT…….. $
12. AMOUNT CERTIFIED (Line 9 minus 10 & 11)…… $
    (Attach explanation if amount recommended differ from the amount applied for.)

CONSTRUCTION MANAGER:
BY: _____ DATE: _____

FORM C

This Certificate is not negotiable. The AMOUNT RECOMMENDED is payable only to the Contractor named herein. Issuance, payment, and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

APPLICATION AND CERTIFICATE FOR PAYMENT

Form P902

PAGE OF PAGES

PROJECT NAME:

DSA Project No:

SCHEDULE OF VALUES

ARCH. Project No:

CM Project No: «Client #»-«Project #»

BID PACKAGE NO:

CONTRACTOR NAME:

A	B	C	D	E	F	G		H	I
			WORK COMPLETED			TOTAL			
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	PREVIOUS	THIS PERIOD	MATERIALS PRESENTLY STORED	COMPLETED AND STORED TO DATE	0%	BALANCE TO FINISH	RETAINAGE
1		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
2		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
3		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
4		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
5		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
6		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
7		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
8		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
9		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
10		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
11		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
12		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
13		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
14		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
15		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
16		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
17		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00
		$0.00	$0.00	$0.00	$0.00	$0.00	#DIV/0!	$0.00	$0.00

FORM P-904
E

CONTRACTOR'S DAILY REPORT NO.: _____

CONTRACTOR: _____

REPORT DATE: _____

Weather: _____ Temp: AM _____ PM _____

PROJECT: Structured Cabling
Twain Harte, CA
27C.1 0045-27C.1

OWNER: Twain Harte School

CM:

Work Performed Today:

Problems/Delays: Action Taken:

Progress:

Special Assignments:

Extra Work: Authorized By: Approximate Cost:

Work Force:	No.	Work Force:	No.	Work Force:	No.

FORM P-904
E

REQUEST FOR INFORMATION

Project: Structured Cabling
Twain Harte, CA

PROJECT 0045-27C.1

Owner: Twain Harte School

CM:

Information Requested From: _____
(Prime Contractor)

Phone: _____ Fax: _____

To:
Attn:

Subject: _____

Contractor's RFI # _____

Date Of Request:

RFI #

Date Information Required: _____

REQUEST: _____

cc: _____ By: _____

REPLY: _____

By: _____ Date: _____

Construction Manager

FORM P-905
F

SUBMITTAL / SHOP DRAWING AND SAMPLE RECORD

PROJECT: PROJECT NO:

CONTRACTOR:

DATE REC'D.	SPEC. SECTION # / SHOP DWG. OR SAMPLE #	TITLE	CONTRACTOR / SUBCONTRACTOR / TRADE	# REC'D	REFERRED TO	REFERRED DATE SENT	# COPIES	REFERRED DATE RET'D.	ACTION APP'VD	ACTION APP'V'D AS NOTED	ACTION REVISE AND RESUBMIT	ACTION NOT APPVD	DATE RET'D	COPIES TO CONTR	COPIES TO OWNER	COPIES TO FILE	COPIES TO FILE

CONTRACTOR'S TRADE CLASSIFICATION LIST

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

Contractor's Name: _____

Project No.: 0045-27C.1

Date: _____

The following are the trade classifications we intend to employ for the work:

_____
(Type or Print Trade Classification)

_____
(Type or Print Trade Classification)

_____
(Type or Print Trade Classification)

_____
(Type or Print Trade Classification)

_____
(Type or Print Trade Classification)

_____
(Type or Print Trade Classification)

_____
(Type or Print Trade Classification)

_____
(Signature)

_____
(Name and Title)

Please Note: If additional trade classifications not listed above are to be employed, the contractor must submit a revised form no less than 7 days prior to the start of that trade classification.

SAFETY PROGRAM CERTIFICATION

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

To: Twain Harte School

The undersigned hereby certifies that it has a Safety Program/Policy in place and that it complies with Labor Code section 6401.7 and title 8, California Code of Regulations, sections 1509 and 3203 and current California/Federal OSHA regulations.

The undersigned also hereby certifies that it will actively and aggressively comply with the aforementioned regulations and its own Safety

_____
(Company Name)

_____
(Signature)

_____
(Print Name & Title)

Date: _____

Project No: 0045-27C.1

Submit this notice within ten days after execution of the prime contract or subcontract and no later than the first day workers are employed on the public work, as required by title 8, California Code of Regulations, section 230. Send this contract-award information to the applicable approved training program or, if the contractor is not approved to train, to all applicable apprenticeship committees for the craft or trade in the project area. Use the current DIR apprenticeship-program directory to identify recipients. *Do not send this form to the Division of Apprenticeship Standards.* Where dispatch is required, request apprentices in writing at least 72 hours before they are needed, excluding Saturdays, Sundays and holidays, and follow the committee, ratio and exception requirements of title 8, California Code of Regulations, section 230.1.

Public Works
Contract Award Information

NAME OF CONTRACTOR		CONTRACTOR'S STATE LICENSE NO.
CONTRACTOR'S MAILING ADDRESS – NUMBER& STREET, CITY, ZIP CODE		AREA CODE & TELEPHONE
NAME & LOCATION OF PUBLIC WORKS PROJECT		DATE OF CONTRACT AWARD DATE OF EXPECTED OR ACTUAL START OF PROJECT
NAME & ADDRESS OF PUBLIC AGENCY AWARDING CONTRACT		ESTIMATED NUMBER OF JOURNEYMEN HOURS
APPRENTICES		
OCCUPATION OF APPRENTICE	NUMBER TO BE EMPLOYED	APPROXIMATE DATES TO BE EMPLOYED

Check One Of The Boxes Below

Please Note: Your election of options below is not to be deemed a request for the immediate dispatch of apprentices. Contractors must make a separate request for actual dispatch.

- ☐ We will request dispatch of apprentice(s) for this job in accordance with title 8, California Code of Regulations, section 230.1(a). We voluntarily choose to comply with the applicable Apprenticeship Committee Standards for the duration of this job only, with regard to training apprentices and to the payment of training contributions.
- ☐ We will request dispatch of apprentice(s) for this job in accordance with title 8, California Code of Regulations, section 230.1(a), but do not agree to be bound by the applicable Apprenticeship Committee Standards in training the apprentices: instead, we agree to employ and train apprentice(s) in accordance with the California Apprenticeship Council regulations, including title 8, California Code of Regulations, section 230.1 governing employment of apprentices on public works projects.
- ☐ We are already approved to train apprentices by the applicable Apprenticeship Committee and we will employ and train under the Standards. We will request dispatch of apprentices for this job in accordance with title 8, California Code of Regulations, section 230.1(a).
- ☐ We will not request dispatch of apprentice(s) since apprentices are not required on this job under the provisions of California Labor Code Section 1777.5, because:

_____

_____

Signature _____

Typed Name _____

Title _____

State of California – Department of Industrial Relations

STATE OF CALIFORNIA - DEPARTMENT OF INDUSTRIAL RELATIONS

The OWNER shall register covered public-works projects with DIR within 30 days after award and no later than the first day workers are employed, subject to applicable statutory exceptions. The CONTRACTOR shall supply requested project data. Retain the DIR registration confirmation in the project file.

DIR PUBLIC-WORKS PROJECT REGISTRATION
CONFIRMATION AND PROJECT RECORD

FROM: Twain Harte School
18815 Manzanita Dr.
Twain Harte, CA 95383

DIR project registration number: _____ Registration date: _____
Attach the DIR registration confirmation.

<table>
<tr><td colspan="2">1. NAME OF CONTRACTOR:</td><td colspan="2">2. CONTRACTOR'S LICENSE NO.</td></tr>
<tr><td rowspan="2">3. MAIL ADDRESS (Street Number Or PO Box)</td><td colspan="3">4. CITY</td></tr>
<tr><td>5. ZIP CODE</td><td colspan="2">6. TELEPHONE NUMBER</td></tr>
<tr><td colspan="4">7. ADDRESS OR LOCATION OF PUBLIC WORKS SITE (INCLUDE CITY AND/OR COUNTY)</td></tr>
<tr><td>8. CONTRACT OR PROJECT NUMBER:</td><td>BID PACKAGE NO.</td><td colspan="2">9. DOLLAR AMOUNT OF CONTRACT AWARD</td></tr>
<tr><td>10. STARTING DATE (ESTIMATED MONTH/DAY/YEAR – USE NUMBERS)</td><td>11. COMPLETION DATE (ESTIMATED MONTH/DAY/YEAR – USE NUMBERS)</td><td colspan="2">12. NUMBER OF WORKING DAYS (CALENDAR DAYS)
_____ DAYS</td></tr>
<tr><td colspan="2">13. TYPE OF CONSTRUCTION (HIGHWAY, SCHOOL, HOSPITAL, ETC.)</td><td colspan="2">14. NEW CONSTRUCTION ALTERATIONS</td></tr>
<tr><td colspan="4">15. CLASSIFICATION OR TYPE OF WORKER (CARPENTER, PLUMBER, ETC.) THAT WILL BE EMPLOYED BY THE CONTRACTOR(S)</td></tr>
<tr><td colspan="4">16. IS LANGUAGE INCLUDED IN THE CONTRACT AWARD TO EFFECTUATE THE PROVISIONS OF SECTION 1777.5
As Required by the Labor Code?…… ☑ YES θ NO
IS LANGUAGE INCLUDED IN THE CONTRACT AWARD TO EFFECTUATE THE PROVISIONS OF SECTION 1776
As Required by the Labor Code?…… ☑ YES θ NO</td></tr>
<tr><td>17. SIGNATURE</td><td>18. TITLE
District Superintendent</td><td colspan="2">19. DATE</td></tr>
<tr><td colspan="2">20. PRINTED OR TYPED NAME
District Superintendent</td><td colspan="2">21. TELEPHONE NUMBER</td></tr>
</table>

GUARANTEE

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

We guarantee that the construction work described above has been performed in accordance with and complies with the contract documents. We agree to repair or replace any or all of the work, together with any other adjacent work which may be required in connection with it, that may prove to be defective in workmanship or material within a period of **One year** from the date of "Final Notice of Completion", ordinary wear and tear excepted.

In the event of our failure to comply with these conditions within a reasonable period of time, as determined by **OWNER**, but not later than **twenty (20)** days after being notified in writing by the **OWNER**, we authorize **OWNER** to proceed to have the defects repaired at our expense, for which we will pay the costs and charges upon demand.

Dated:

(Contractor Name)

BID PACKAGE NUMBER:____ _____

(Signature)

CATEGORY:_____ _____

(Print Name and Title)

Representative (Contractor)
To Be Contacted For Service:

Name: _____

Address: _____

Telephone: _____

SUBSTITUTION WARRANTY

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

In addition to other requirements, Contractor shall warrant in writing that substituted materials shall perform as specified, and assume complete responsibility for same, including responsibility and costs required for modifications to building or other materials or equipment, and any additional coordination with work of other trades. Testing, if required, shall be paid by the Contractor. **THE FOLLOWING IS AN *EXAMPLE ONLY* OF THE TYPE OF SUBSTITUTION WARRANTY WHICH WILL BE EXECUTED BY THE CONTRACTOR, *ON HIS/HER OWN LETTERHEAD*!**

SUBSTITUTION WARRANTY

We propose to provide:

(Describe items being proposed for substitution)

for Twain Harte School**, Twain Harte, CA** in lieu of and as an equivalent to _____

_____
(Describe specified project)

as indicated on the drawings and described in Section _____ of the Specifications.

We agree to assume the cost of any modifications to other portions of the work as necessary to accommodate our material(s) and system(s).

We hereby warrant that _____ (PROVIDE DESCRIPTION)

is the equivalent of _____
(SPECIFIED PRODUCT)

in every respect and will perform satisfactorily under the conditions and use indicated on the Drawings and described in the Specifications.

Signed: _____ Date: _____
(MANUFACTURER/SUPPLIER/OTHER)

Signed: _____ Date: _____
(SUBCONTRACTOR)

Signed: _____ Date: _____
(CONTRACTOR)

DRUG-FREE WORKPLACE CERTIFICATION

PROJECT: 0045-27C.1 – STRUCTURED CABLING
OWNER: TWAIN HARTE SCHOOL

As a requirement of these Project documents, the CONTRACTOR shall maintain the drug-free workplace measures specified in this certification. Government Code sections 8350 et seq. also apply to the extent this contract or its funding brings it within that law. Any withholding, termination or debarment shall be imposed only under applicable law and lawful contract terms.----
As a requirement of these Project documents, the CONTRACTOR shall certify that it will provide a drug-free workplace 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 the person's or organization's workplace and specifying actions which will be taken against employees for violations of the prohibition;
b) Establishing a drug-free awareness program to inform employees about all of the following:

1) The dangers of drug abuse in the work place;
2) The person's or organization's policy of maintaining a drug-free workplace;
3) The availability of drug counseling, rehabilitation and employee-assistance programs;
4) 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) and that, as a condition of employment on the contract, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the drug-free workplace requirements of these Project documents listed above and Government Code section 8355 to the extent applicable and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drugfree awareness program, and (c) requiring that each employee engaged in the performance of the contract be given a copy of the statement required by Section 8355(a) and requiring that the employee agree to abide by the terms of that statement. -
I understand that a false certification or failure to carry out these workplace commitments may result in remedies authorized by applicable law and lawful contract terms. Any payment withholding, termination or debarment shall be imposed only by the authorized entity and under the applicable procedures.-
I acknowledge the drug-free workplace requirements in these Project documents and certify that I will comply with them and with Government Code sections 8350 et seq. to the extent applicable.-

_____
(Company Name)

_____
(Signature)

_____
(Print Name & Title)

Date: _____

Project Number: 0045-27C.1

Category: _____

PREVAILING WAGE
COMPLIANCE CERTIFICATION

TO: Twain Harte School
18815 Manzanita Dr.
Twain Harte, CA 95383

PROJECT: Structured Cabling
Twain Harte, CA
27C.1 0045-27C.1

I hereby certify that I will conform to the State of California Public Works Contract Requirements regarding wages, benefits, on-site audits and lawful inspections without a contractual advance-notice restriction, payroll records, and apprentice and trainee employment requirements.

CONTRACTOR:

_____
(Company Name)

_____
(Signature)

_____
(Print Name & Title)

Date: _____

Project Number: 0045-27C.1

Wage Category: _____

CONSENT OF SURETY

CONSENT OF SURETY COMPANY TO FINAL PAYMENT	OWNER ARCHITECT/ENGINEER CONTRACTOR SURETY OTHER

PROJECT: Structured Cabling
(Name & Address): LOCATION: Twain Harte , CA
27C.1 0045-27C.1

TO: (OWNER) Twain Harte School

ARCH/ENGINEERS' 27C.1
CONTRACT FOR:
CONTRACT DATE:

CONTRACTOR:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the (here insert the name and address of the Surety Company):

, SURETY COMPANY,

on bond of (here insert name and address of Contractor)

, CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to Twain Harte School, OWNER, as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,
The Surety Company Has Hereunto Set Its Hand This _____ day of _____ 20 _____

_____
Surety Company

By: _____
Signature By Authorized Representative

Attest:
(Seal)

_____
Title

CONDITIONAL WAIVER AND RELEASE
ON PROGRESS PAYMENT

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Name of Claimant: _____

Name of Customer: _____

Job Location: _____

Owner: _____

Through Date: _____

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: _____

Amount of Check: $_____

Check Payable to: _____

Exceptions

This document does not affect any of the following: (1) Retentions. (2) Extras for which the claimant has not received payment. (3) The following progress payments for which the claimant has previously given a conditional waiver and release but has not received payment: Date(s) of waiver and release:_____ Amount(s) of unpaid progress payment(s): $_____

(4) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Name of Claimant: _____

_____
(Company Name)

_____
Claimant's Signature:

_____
Claimant's Printed Name and Title:

Date of Signature: _____

Project Number: 0045-27C.1

CONDITIONAL WAIVER AND RELEASE
ON FINAL PAYMENT

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Name of Claimant: _____

Name of Customer: _____

Job Location: _____

Owner: _____

Through Date: _____

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: _____

Amount of Check: $_____

Check Payable to: _____

Exceptions

This document does not affect any of the following:_____
_____

Disputed claims for extras in the amount of: $_____

Name of Claimant:

_____
(Company Name)

_____
Claimant's Signature:

_____
Claimant's Printed Name and Title:

Date of Signature: _____

Project Number: 0045-27C.1

UNCONDITIONAL WAIVER AND RELEASE
ON FINAL PAYMENT

Identifying Information
Name of Claimant: _____
Name of Customer: _____
Job Location: _____
Owner: _____
Unconditional Waiver and Release
This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job.
Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below.
The claimant has been paid in full.
Exceptions
This document does not affect the following:
Disputed claims for extras in the amount of: $_____

Name of Claimant:

Claimant's Signature:

Claimant's Printed Name and Title:

Date of Signature: _____

Project Number: 0045-27C.1

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

WORKERS' COMPENSATION CERTIFICATE

TO: Twain Harte School
18815 Manzanita Dr.
Twain Harte, CA 95383

PROJECT: Structured Cabling
Twain Harte, CA
27C.1 0045-27C.1

Labor Code Section 3700 provides:

"Every employer except the state 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 either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.
(c) For any county, city, city and county, municipal corporation, public district, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702."

I am aware of the provisions of Labor Code Section 3700 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 and during the performance of the work on this Project.

Name of Contractor _____ Date _____

By:_____
Signature

_____
Print Name Title

[In accordance with Article 5 (commencing at Section 1860), Chapter 1, Part7, Division 2 of the Labor Code, including the certification required by Labor Code section 1861, the above certificate must be signed and filed with the awarding body prior to performing any work under the contract].

SCOPE OF WORK

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.

GENERAL REQUIREMENTS

Contractor will be required to provide applicable State License for the scope of work described herein. The contractor's quote shall include a warranty for all work to be performed for no less than 12 months from the date of completion.Clean up work will be performed daily and will be required in one area before moving to another area to perform work.

The installation schedule pertaining to this bid package must be adhered to by the contractor or liquidated damage will be assessed by the Owner in the amount listed in the agreement. No extension of time will be granted unless written consent from the owner is given. Buildings will be available to the contractor during regular business hours for investigation and prep work. This work shall not disrupt classroom instruction nor interfere with the safety of students and staff.

Contractor’s price will include cutover and testing of equipment after 4:00pm and before 7:00am of the next business day. Construction hours and site access may vary due to normal school hours, holidays, summer break. Contractor will work with the District to make use of non-instructional time that falls within normal school hours such as minimum days, school holidays, and/or professional development days. Any proposed alternate, or equal products and services to be submitted should follow guidelines listed in the RFP and emailed to the listed contact.

Respondents should clearly identify all ELIGIBLE and INELIGIBLE charges in the proposal and Item 21 Bulk Submission Form.

STRUCTURED CABLE

Horizontal Cabling - All new Category 6/6A data cabling shall be installed per the locations shown in the drawings provided. All new cabling systems shall include new termination hardware installed per specifications. All cabling shall be concealed. Contractor to supply and install all necessary pathways: (conduit, raceway, wire basket tray, j-hooks, faceplates, etc.). There will be seven (7) exterior cable locations that will require weatherproofing. All cable management ties installed in MDF/IDFs shall be reusable Velcro based Category 6/6a cable ties. Removal of all unused cabling and connectivity devices. Contractor to label ceiling with cable ID for all above ceiling cable outlet locations. Contractor will schedule all demo with district after cutting over is complete. Contractors can find all horizontal cabling material part numbers in the provided specification within the RFP.

IDF Cabinet – A New 4 post cabinet (CPI - ZA42-00000-71 or equivalent) is to be installed in the Staff Room see drawings for location. All existing equipment shall be moved from the existing IDF in Kinder Room to the (N) IDF Cabinet. Fiber Termination unit shall stay in the existing location and a 100ft Fiber Patch cable to provide is to be installed to the (N) IDF Cabinet.

General Notes:

- The contractor shall field verify all site conditions and all pathways prior to start of work.
- Contractors are to include in their proposal all pathway core hole penetrations through interior walls and exterior walls.
- Contractors will include in their proposal all equipment rentals, all tools, all ladders, trenching, underground boring, GPR locates, dig permits and temporary fence rental needed to complete this project.
- Contractor to field verify all LB type conduit fittings. All fittings 1.5" and larger that will meet the cables bend radius is acceptable to pull fiber. Any LB type conduit fittings smaller than 1.5" will need to be reviewed with the district to have replaced if necessary.

INCLUDED IN THE CONTRACTOR'S SCOPE

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

1. New Category 6/6A cables will be installed to each designated location.
2. New Category cables to each designated location from equipment cabinets/racks.
3. New exterior Category 6A cables to each designated location.
4. Two (2) new patch cables will be provided with each Cat6/6A cable outlet installed.
5. 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.
6. Provide Testing, labeling, and warranties as specified in the construction documents.
7. Coordination with district upgrade schedule for demo and removal of replaced cable.
8. Install new 4 post cabinet (CPI - **ZA42-00000-71** or equivalent)
9. Move all existing equipment to the new IDF per drawings.
10. Provide 100ft fiber patch cord to the new IDF from the existing Fiber Termination Unit.
11. Coordinate with the district the cutover and removal of the existing IDF.

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.

27 0000 – Telecommunications Systems 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 09 9000 – Painting and Coating
   - 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.

1.3 Regulatory References

A. The Contractor will comply with the following:

1. Federal:
   - National Electrical Code (NEC) 2008 or latest approved
     - Chapter 8: "Communications Systems"
     - Article 250: "Grounding"
   - NFPA 70 – National Electric Code
   - FCC – Part 15, Part 68
   - ADA – Americans with Disabilities Act
2. State of California
   - CCR, Part 2 – California Building Code
   - CCR, Part 3 – California Electrical Code
   - Occupational Safety and Health Act (OSHA)
   - Title 24, Building Standards, State of California
   - Title 19, California Code of Regulations
   - Title 8, Electrical Safety, State of California
3. ANSI Standards
   - ANSI C2-2001 National Electrical Safety Code
   - ANSIC80.3 Specification for Zinc-Coated Electrical Metallic Tubing
   - ANSI/UL 797 Electrical Metallic Tubing
   - ANSI/CEA S-83-596-2001 – Fiber Optic Premises Distribution Cable Technical Requirements
4. Industry Standards
   - Telecommunications Industry Associations/Electronics Industry Association (TIA/EIA)
   - ANSI/TIA-568-C Commercial Building Telecommunications Cabling Standard

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

B. 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.

1.4 Contractor Requirements/Qualifications

A. Safety and Indemnity

1. General
   - The contractor shall be solely and completely responsible for conditions of the job site, including safety of persons and property during performance of work.
   - 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.
   - 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.

1.5 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 Leviton Certified Installer.
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.

1.6 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 2 Documentation

2.1 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.

2.2 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 book marks 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

2.3 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, Engineer 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.

2.4 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.

2.5 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 drawings 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 electronic (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/Engineer 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/Engineer, up to and including 100% re-test. Any re-testes 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.

B. Network Electronics

1. Upon completion of the installation, the electronics service provider shall provide four (4) full documentation sets to the Owner's Representative/Engineer for approval, one (1) to be a hardcopy and three (3) to be electronic copies. Documentation shall include the items detailed in the sub-sections below.
2. Documentation shall be submitted within ten (10) working days of the completion of each testing phase. This is includes system single line drawings and maintenance and operation manuals, and all warranty information.
3. The Device Information documents are to be in an Excel spreadsheet format. Each device installed will have individual information entered in the spreadsheet including:
   - Manufacturer and Model of device
   - Physical Location (may include a digital picture), and mount type
   - Serial Number of device
   - IP Address(es) assigned to device
   - Firmware revision installed
   - Address and contact information of responsible staff
4. Each Device Configuration document shall be provided in both an electronic and text document format. One (1) to be a hardcopy print and three (3) to be electronic copies. The Device Configuration documents are to be in a text file format. Each device installed will have the following configuration information included (if applicable):
   - Manufacturer and Model of device
   - Current installed (running) configuration
   - Firmware revision installed
   - Installed modules, blades, or accessories
5. Equipment documentation shall include the items listed below:
   - Maintenance and Operations Manuals
   - All System Passwords and Management/Programming Software

END OF SECTION

27 0528 – Communications Pathways

Part 1 General

1.1 Statement of Work

A. General

1. 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.
2. 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.
3. The contractor shall furnish and install all work necessary to make compete 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.

1.2 References

A. Regulatory References

1. Contractors will comply with all requirements as specified in Section 27 0000 '1.3 – Regulatory References'.

1.3 Safety and Indemnity

A. Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '1.4 – Safety and Indemnity'.

1.4 Contractor Qualifications

A. Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '1.5 – Contractor Qualifications'.

1.5 Quality Assurance

A. Contractors shall comply with all requirements as specified in Section 27 0000 '1.6 – Quality Assurance'.

1.6 Equivalent Products

A. All products described and part numbers given in this specification are those of Panduit and Cooper B-Line unless otherwise noted.

B. Pre-Approved Equals

- Utility Vault Company, Christy Concrete, BES
- Hoffman, B-Line, Circle AW
- Carlon, Allied Tubing, MaxCell
- RANDL Inc., Thomas & Betts, Bridgeport, Appleton, Erico, Minerallac
- Wiremold, Hubbell

2. Contractors wishing to approve a system other than those specified in this document shall do so in accordance with Section 27 000 '2.1 Equivalent Products'.

1.7 Submittal Documentation

A. The successful contractor shall provide their submittal package in accordance with the Section '01 20 00 – Submittal Schedule' and Section 27 0000 '2.2 – Submittal Documentation'.

1.8 Acceptance

A. The contractor shall comply with all requirements as listed in Section 27 0000 '2.3 – Acceptance'.

1.9 Warranty

1. The contractor shall comply with all requirements as listed in Section 27 0000 '2.4 – Warranty'.

Part 2 Products

2.1 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”

- 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.
- 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.

4. Metallic Pull Boxes and Terminal Cans
   - 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.
   - NEMA 3R Terminal Cans
     - Used for outdoor use under-eve, 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
   - NEMA 4 Terminal Cans
     - Used for outdoor use vertical or Horizontal under-eve, 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
5. Conduit
   - 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) way be used in all locations.
       For underground runs in direct contact with earth, conduit shall be wrapped in10mil PVC tape or shall be factory PVC-over-GRS conduit.
     - Intermediate metallic conduit (IMC) may be used indoor and outdoor locations, not underground.
   - 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.

- 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.
- 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.
- 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.
- Factory made pipe straps shall be one-hole malleable iron or two-hole galvanized clamps.
- Manufacturer: Appleton, Crouse-Hinds, B-Line, Unistrut, T&B, or an approved equivalent product.
- Conduit Terminations and Plugs
- 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.
- 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.

- 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

6. Duct Bank Locating Cable (Detectable Warning Tape)
   - 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"
7. Inter-duct
   - 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 ¾" 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

- 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

- 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

8. General
   - The contractor shall provide a complete cable support system as shown on the project drawings.
   - The cable support system shall be used to distribute communications cable for utility needs.
   - The support system shall consist of Wire Basket Tray, Ladder rack, and j-hook pathways, and appropriated fittings and accessories for a complete installation.
9. Cabling Support System
   - 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.
   - Wire Mesh Cable Tray (Wire Basket)
     - 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 wire mesh cable tray and installation accessories in the amount necessary to support all horizontal cabling.
- Part#: Contractor to provide and install wire mesh cable tray equal to Kable Kontrol, 6”W x 60”L x 4”H KK-6X4X5-EZ and accessories.

10. Pull Rope
    - 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.
    - 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.
    - 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.

2.2 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 - intumesant sealant
    - SSP - putty and putty pads
    - SSAMW - mineral wool
    - IC 15WB+ - intumesant sealant
    - CP 25WB+ - intumesant sealant
    - Fire Barrier Moldable Putty+ - putty and putty pads
    - FS-ONE - intumesant 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

E. 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 ¼" x 4" x 5.25" telecommunications grounding bus bar (TGB) at every backboard.
3. Provide as a minimum #6 awg green THHN conductor from each equipment rack, cable tray or wall mounted equipment to a TGB.

2.3 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

3.1 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.

3.2 Installation

A. 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 Engineer 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. 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.
4. Fire Stop System
   - 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.
   - Fire stop 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 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).

3.3 System Close Out and As-Built Documentation

1. Documentation
   - Refer to Section 27 0000 '2.5-A – Close Out Documentation' for requirements.

END OF SECTION

27 1000 – Structured Cabling

Part 1 General

1.1 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.

1.2 References

A. Regulatory References

1. Contractors will comply with all requirements as specified in Section 27 0000 '1.3 – Regulatory References'.

1.3 Safety and Indemnity

A. Requirements

1. Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '1.4 – Safety and Indemnity'.

1.4 Contractor Qualifications

A. Requirements

1. Contractors will submit the necessary documentation to demonstrate their compliance with Section 27 0000 '1.5 – Contractor Qualifications'.

1.5 Quality Assurance

A. Requirements

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

1.6 Equivalent Products

A. All Products described and Part Numbers given in this Specification are those of Berk-tek/Leviton 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 Email

1.7 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.

1.8 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 '2.2 – Submittal Documentation'.

1.9 Acceptance

A. Requirements
1. The contractor shall comply with all requirements as listed in Section 27 0000 '2.3 – Acceptance'.

1.10 Warranty

A. Requirements
1. The contractor shall comply with all requirements as listed in Section 27 0000 '2.4 – Warranty'.

Part 2 Products

2.1 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 6A Data/Voice Outlet Patch Cords
   - All category 6A 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 6A channel patch cords shall be constructed with category 6A patch cable, 28 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, 75º C, Article 800 CSA Type CMG.
   - All category 6A channel patch cords shall be 100% factory tested to pass return loss (RL) and near-end cross talk (NEXT).
   - All category 6A 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 awarded contractor 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 VoIP/Intercom patch cords will be ten (10) feet in length.
   - Wireless Access Point & Camera patch cords will be five (5) feet in length.
   - Spare Cables in above ceiling space patch cords will be thirty (30) feet in length.
   - **Colors:**
     - Data BLUE
     - VoIP/Intercom BLUE
     - WAP BLUE
     - Camera BLUE
     - Spare Cables BLUE
   - **Quantity:** Contractor will provide one (1) patch cord for every outlet cable shown on the drawings.
   - **Part Number:** Leviton
     - Data **H6A10-10L**
     - VoIP/Intercom **H6A10-10L**
     - WAP **H6A10-5L**
     - Camera **H6A10-5L**
     - Spare Cables **H6A10-30L**

C. Modular Inserts and Jacks
1. Category 6A Data/Voice Jack
   - Jack will meet the Category 6A 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 6A 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 22-28 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 theT568B wiring scheme.
- Quantity: Contractor will provide one jack for every outlet cable shown on the drawings.
- **Color:**
  - Data BLUE
  - VoIP/Intercom WHITE
  - WAP YELLOW
  - Camera GREEN
  - Spare Cables GREEN
- **Part Number: Leviton**
  - BLUE **6110G-RL6**
  - WHITE **6110G-RW6**
  - YELLOW **6110G-RY6**
  - GREEN **6110G-RV6**

2. Blank Insert
   - **Color:** Coordinate with Electrical, based on faceplate color. Sample of approved insert shown below.
   - **Quantity:** Contractor will provide one insert for every blank outlet port in all faceplates.
   - **Part Number: Leviton**
     - WHITE **41084-BW**

D. Wall Mount, Modular Furniture, Blank Faceplates & Surface-Mount Boxes

1. Standard Keystone Faceplate
   - Faceplates shall be UL listed and CSA Certified
   - Faceplates shall be 2.75" W x 4.5" H
   - Faceplates shall provide for ANSI/TIA 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**: Coordinate with electrical, based on faceplate color. Sample of approved faceplate shown below.
   - **Quantity:** Contractor will provide one single gang faceplate for each outlet shown on the drawings.
   - **Part Number: Leviton**

Part Number	Description
42080-2WS	Single gang, vertical faceplate holds up to two Quickport Copper Jacks
42080-4WS	Single gang, vertical faceplate holds up to four Quickport Copper Jacks
42080-6WS	Single gang, vertical faceplate holds up to six Quickport Copper Jacks
49910-SW2	2-Port Modular Furniture Quickport Faceplate
41089-2WP	2-Port Surface-Mount Quickport Box (Biscuit)

2. Blank Wall Plates
   - Faceplates shall be constructed from either plastic or stainless steel, coordinate with electrical, based on electrical faceplate.
   - Faceplates shall be UL Listed and CSA Certified
   - Faceplates shall be 2.75" W x 4.5" H for single gang.
   - **Color:** Faceplate color and material will be coordinated with electrical, based on adjacent outlet faceplate.
   - **Quantity:** Contractor will provide one (1) faceplate for each unused data/voice/video/intercom/security outlet shown on the drawings.

- **Part Number: Leviton**
  - WHITE **80514-W**
  - STAINLESS **84014**
  - WEATHER RESISTANT **83014-EXT**

2.2 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 6A Copper Unshielded Twisted Pair (UTP) Cable
   - This fully compliant CAT 6A cable meets or exceeds all industry requirements including ANSI/TIA-568-C.2. The cable utilizes a proprietary MaTriX which assures excellent alien crosstalk performance. This cable fully complies with UL 444 requirements for an unshielded twisted pair product.
   - Pair Count; 4, Conductor; Solid annealed copper AWG (mm) 23 (0.57), Insulation; CMR: Thermoplastic, CMP; FEP
   - Characteristic Impedance (Ohms) 100 ± 15
   - Velocity of Propagation (%) CMR: 69; CMP: 72
   - Nominal Diameter in (mm) CMR 0.210 (5.3); CMP 0.224(5.7)
   - Ethernet 10BASE-T, 100BASE-T (Fast Ethernet), 1000BASE-T (Gigabit Ethernet),
   - 10GBASE-T (10 Gigabit Ethernet over limited distances as specified in the industry 10GBASE-T standards)
   - Power over Ethernet (PoE) – IEEE 802.3af; PoE+ – IEEE 802.3at Type 1 and 2
   - Cable shall be available in a Plenum and Riser rated jackets.
   - **Jacket Color:**
     - All Cat 6A: Blue
   - **Quantity:** See Drawings for Quantity and installation details
   - **Part Number:** shall be equal to **Leviton**:
     - For Riser Application: **11142398**
     - For Plenum Application: **11141650**
     - For Indoor/Outdoor Application: **11142753 (Black)**

2.3 Backbone Cabling

A. General

1. The backbone cabling system is the portion of the telecommunications cabling system that extends from the Main Distribution Frame (MDF) to each Intermediate Distribution Frame (IDF).
2. The Backbone Cabling system includes:
   - Fiber Optic 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 be an indoor/outdoor rated jacket
   - Cable shall be constructed using a tight buffer design
   - Cable will be fully water blocked combining overall water blocking tape and a moisture blocking gel for each individual tube.
   - 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:
     - In service = 10x Cable diameter
     - Installation = 20x Cable diameter
     - Operating Temp. = -40°C to +70°C
     - Storage Temp. = -40°C to +70°C
   - Cable shall be constructed of 125µ Single mode capable of:
     - 1 Gigabit Ethernet Link at 10,000m (@1310nm/1550nm)
     - 10 Gigabit Ethernet Link at 5,000m/30,000m (@1310nm/1550nm)
   - The fiber optic cable in this specification is manufactured by **Berk-Tek**.
   - **Color:** fiber optic cable jacket shall be **YELLOW**
   - **Quantity:** See Drawings for quantity and installation details.
   - **Part Number:** shall be equal to **Berk-Tek**:
     - 12 Strand Riser Single-Mode Fiber PDP012-AB0707-I/O(YEL)

2.4 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
   - Firestop System

B. Copper Patch Cords

1. Category 6A Patch Cords
   - TR copper patch cords shall comply with those specified in 2.1 Work Area Sub-System, A. Patch Cords, 2 Category 6A Wireless Access Point 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 the awarded contractor to install all Patch Cords. Contractor will verify quantity of patch cords prior to ordering.
   - **Color:**
     - Data BLACK
     - Voice/Intercom BLACK
     - WAP BLACK
     - Camera BLACK
   - **Quantity:** Contractor will provide one (1) patch cord for every outlet shown on the drawings.
   - All patch cords will be one (1) feet in length.
   - **Part Number**: Leviton
     - BLACK **H6A10-1E**

C. Fiber Patch Cords

1. Single Mode Fiber Patch Cords
   - Patch cords shall be Duplex LC to LC Single Mode fiber patch cords
   - All patch cords shall be factory polished and 100% optically tested for superior performance.
   - Cables shall have a mated pair MM insertion loss of than 0.60 dB (0.25 dB typical)
   - Cable retention: > 25 pounds
   - All optical, mechanical and environmental performance shall meet and/or exceed the ANSI/TIA 568-C.3 specifications.
   - Fiber patch cords will be two (2) meter long for MDF side.
   - Fiber patch cords will be one (1) meter long for IDF side.
   - **Color:** N/A
   - **Quantity:** Contractor will provide and install two (2) fiber patch cords for every twelve (12) strands of fiber optic backbone cable run.
   - **Part Number: Leviton**:
     - MDF Single-Mode UPDLC-S02
     - IDF Single-Mode UPDLC-S01

D. Horizontal Cable Termination Equipment

1. Copper Termination Equipment – Category 6 and 6A Patch Panels
   - 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 6/6A 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 6/6A cables being terminated at the individual TR by 1.25 and providing additional panel in the nearest 24 port increment.
- **Part Number:** Leviton
  - 24 Port **49255-L24**
  - 48 Port **49255-L48**
- Patch Panels will utilize the jacks noted in Section 2-2.1-C of this specification.

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 single 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: Leviton**
     - 1RU Up to 72 LC Fibers 5R1UL-F03
     - 2RU Up to 144 LC Fibers 5R2UL-F06
     - 3RU Up to 216 LC Fibers 5R3UL-F12
     - 4RU Up to 288 LC Fibers 5R4UM-F12
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: Leviton**
  - SPLCS-12L

F. Cabinets, Racks, and Enclosures

1. General
   - Contractor will provide the following 'IDF' enclosures and components based on the number of cables that will be terminated.
2. Wall Mount Cabinets
   - Construction:
     - Wall mounted, three-part sectional, with:
     - Steel, fixed mount wall terminal section
     - Steel, center swing out section
     - Vented steel locking front door.
     - Fully depth-adjustable front and rear mounting rails.
     - Combined depth of swing-away center section and fixed rear section to be not less than as scheduled below.
     - Center section swing is reversible, and can be both keylocked and padlocked
   - Approvals:
     - UL Standards Tested: UL2416
     - ASCE: 7-10
     - UL Load Capacity: 500 pounds minimum.
     - Seismic Certified: 140 pounds minimum, dynamic load.
     - Meets 2010 CBC; 2012 IBC; ASCE 7-05 (2005 Edition) & ASCE 7-10 (2010 Edition) and the 2006 & 2009 editions of NFPA 5000 for use in areas of high seismicity, Seismic Use Group III, Zone 4 or Seismic Design Category (SDC) "D" with lateral force requirements for protecting 140 lbs. of essential equipment in locations with the highest level of seismicity and top floor or rooftop installations with an Importance factor (Ip) of 1.5
     - Front door 64% Open Minimum, Center Section vented to permit air intake from front and discharge to sides.
   - **Color:** Black
   - **Quantity:** Provide as shown on Drawings
   - **Part Number: Chatsworth (CPI)**
     - Cube-iT 19U 36"H x 24"W x 30"D **12419-736**
   - **Chatsworth (CPI) Accessories** (Provide for each new cabinet shown on drawings)
     - Dual-Fan and Filter Kit **40975-001** (Qty: 2 per Cabinet)
     - LED Light Kit **12803-701** (Qty: 1 per Cabinet)
     - Power Strip **12820-701** (Qty: 1 per Cabinet)
     - Equipment Mounting Rail Kit
       - For 36"H Cabinets **12787-536** (Qty: 1 per Cabinet)
   - **Part Number: Hubbell**
     - 5U 42.2"H x 24.2"W x 10"D **RE4XB**
   - **Hubbell Accessories** (Provide for each new cabinet shown on drawings)
     - Fan Kit **REKF** (Qty: 1 per Cabinet)
     - Fan Filter Kit **HWKFF** (Qty: 1 per Cabinet)

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. Fiber Management
   - Construction:

- 24-inch or 11.55-inch diameter steel ring stores fiber slack using Velcro fasteners at regular intervals around ring.
- Screw fastens to backboard at MDF or IDF.

- **Color:** Black
- **Quantity:** See Drawings for quantity
- **Part Number:** Equal to **Leviton**
  - MDF 48900-OFR
  - IDF 48900-IFR

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 ¾" 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 once 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 3 Execution

3.1 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.

3.2 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.

3.3 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 La + Lb). 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. 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.

E. 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.

F. 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).

3.4 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

END PROJECT MANUAL